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About The Encore®

Congratulations on the purchase of your new Encore lighting control console!

The Encore Series of lighting control consoles have been designed to be both simple and intuitive to operate, yet sophisticated and powerful in their programming. You'll discover that the Encore Series has a "multi-level user" operating approach: with a wide variety of manual and programmed controls, running lights with the Encore can be as basic or as comprehensive as your needs require. For example:

✂✂ The Encore 24/48 and 48/96 models may be operated as either completely manual 2-Scene Preset consoles, or as a fully programmed Memory consoles.

✂✂ The first 48 or 96 channels on the Encore 24/48 and 48/96 models have dedicated channel faders for quick, live control.

✂✂ Advanced cue parameters include:
- multiple parts - special cue timing parameters
- custom fade profiles - cue names
- cue effects - cue macros

✂✂ Advanced cue sequencing features such as links, follows and subroutines.

✂✂ Programming features for operating color scrollers and moving lights.

✂✂ MIDI Interface for synchronization with other control devices.

✂✂ Hand Held Remote optional remote control device gives you freedom.

✂✂ Optional Auxiliary and Remote Monitors provide additional information where you need it.

✂✂ Operating System stored in Flash-ROM allows easy System Software upgrades from floppy disk.

✂✂ Selective Memory Loading from standard 3.5" High Density 1.44 MB floppy disk.

✂✂ Help Feature provides instant on-line answers to your questions.

✂✂ Factory-installed or Field-upgradable options:
- 2nd local monitor (Dual Video Option)
- Remote Video support (ColorNet? Option)
- Expansion Option for 24/48 and 48/96 models (increased channel and cue capacity)
- XL/2 Upgrade Kit (for XL model only)

In addition, the monitor displays --your most important interface with the Encore-- have been carefully laid out and color-coded, providing concise, at-a-glance feedback for all

console functions. Programming is simplified by a command syntax that doesn't require parameters to be entered in any specific sequence. And don't be afraid to take your show on the road-- the Encore's rugged physical design will stand up to a wide variety of abuse.

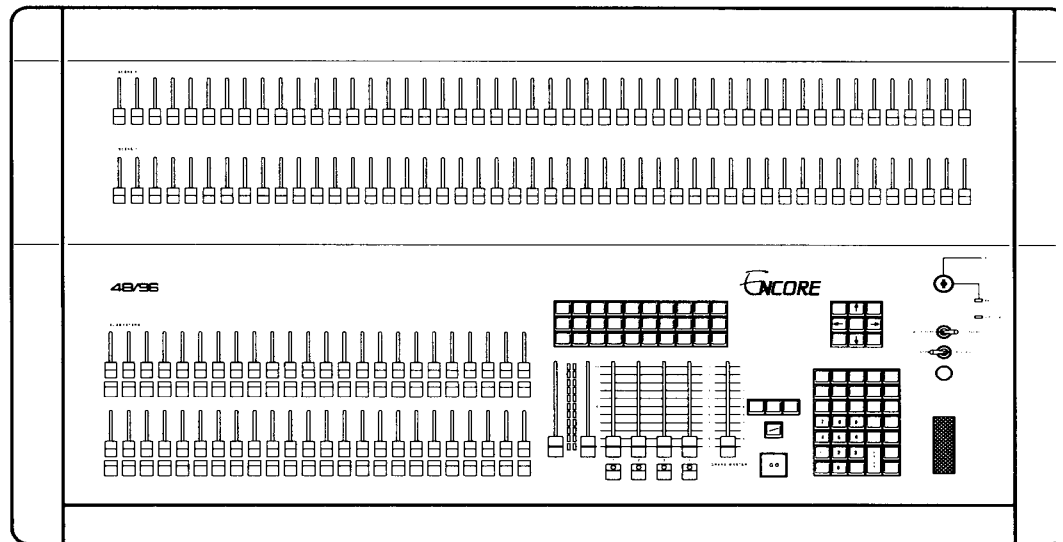
There are six different Encore models. The two main differences are:

- ✂✂ The total number of channels, dimmers, submasters, cues, groups and effects
- ✂✂ The ability to operate in a Two-Scene preset mode, in addition to the Multi-Scene mode

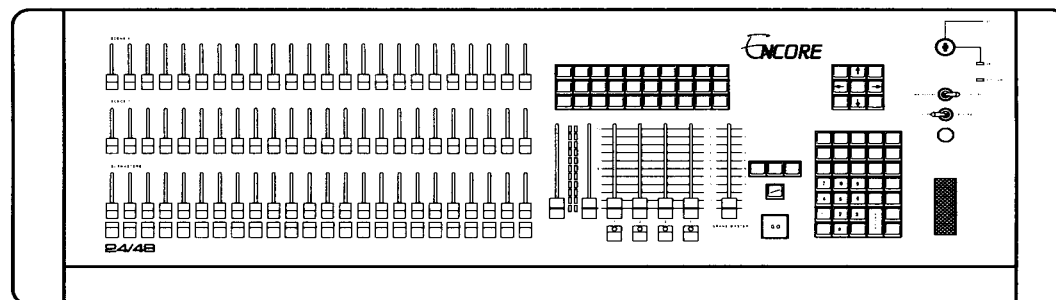
	<u>24/48</u>	<u>24/48</u> <u>Expanded</u>	<u>48/96</u>	<u>48/96</u> <u>Expanded</u>	<u>XL</u>	<u>XL/2</u>
Channels						
Two-scene mode	24	24	48	48	N/A	N/A
Multi-Scene mode	144	512	144	512	512	1024
Dimmers	512	512	512	512	512	1024
Submasters	24	24	48	48	48	48
Total Cues/Groups (per show)	300	550	350	600	600	600
Groups	200	200	200	200	200	200
Effects (per show)	99	99	99	99	99	99

Table I-1, Encore Models and Capacities

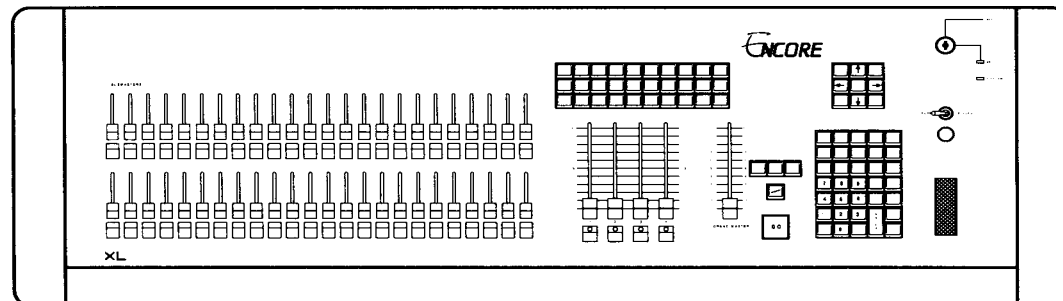
Encore Model 48/96



Encore Model 24/48



Encore Models XL and XL/2



About This Manual

How to Use This Manual


The Encore Manual is designed for both the first time user and the advanced professional user. The **User Guide** is the first half of this manual. The User Guide is designed so the novice user can start at the beginning, with the most basic topics discussed first. It is arranged in chapters in order of increasing complexity. The User Guide covers all topics in depth.


The **Reference Section** is the second half of this manual. The Reference Section is a complete documentation of soft keys, hard keys, and operational topics, arranged alphabetically. The Reference section is intended to provide quick answers to specific questions without making you read through an entire chapter.


Text Conventions Used in this Manual

In this manual, actual key names and keystroke entries appear in capital letters. Soft keys appear inside parentheses: (SOFT KEY). Hard keys appear inside brackets: [HARD KEY].

The key name and keystroke conventions are as follows:


 **Soft Keys** appear as: (UPPERCASE PARENTHESES)
(Soft keys are S1 - S10 on console.)


 **Hard Keys** appear as: [UPPERCASE BRACKETS]
(Hard keys are all other console keys.)


 A **number entry** appears as: [#]


 Single or multiple **number lists** appear as: [# list]

 **EXAMPLE:** The soft key, "Show Channel", appears as: (SHOW CHANL)

 **EXAMPLE:** The hard key, "Group", appears as: [GROUP]

 **EXAMPLE:** The number entry, "253", appears as: [253]

 **NOTE:** *In the previous example, you enter the number 253 by pressing the [2], the [5], and the [3] keys.*



 **EXAMPLE:** "[# list]" is used as a generic example of a list of numbers created using the Thru [>], And [+], and Minus [-] keys.


About the User Guide



The User Guide is the first half of this manual. The User Guide has four Parts:



PART I,	GETTING STARTED
PART II,	FUNDAMENTALS OF OPERATION
PART III,	ADVANCED TOPICS
PART IV,	APPENDICES



The User Guide is organized with comprehensive chapters that discuss various topics in depth. The most basic topics start with Chapter 1. The following chapters get progressively more advanced. Topics always provide a description, and may also provide any or all of the following:

  **EXAMPLE:** A sequence of keystrokes that executes a practical example.

 **BASIC RULE:** *A description of a basic rule that you should know. Basic Rules usually apply to more areas of operation than the topic you are reading.*

  **HINT:** *A good tip that will help you operate the console more effectively.*

  **NOTE:** *Important information about console operation specifics. Notes usually point out exceptions to rules.*

  **ADVANCED TOPIC:** A reference to a related advanced topic, typically in a later chapter.

About the Reference Section

The Reference Section is the second half of this manual. The Reference Section is a complete alphabetic listing of soft keys, hard keys, and operational topics. The Reference Section begins with keystroke symbols ([.], [-], [>], etc.). The Reference Section is designed so the experienced user can answer specific questions quickly.

A description of each console key is provided in the Reference Section. The topic describes where the key is located, and how it functions. A keystroke procedure that uses the key is also provided. Other keystroke combinations will become apparent as you gain more experience with Encore commands. Related topics are also listed at the end of each topic entry.

About the Appendices

The following appendices are included as part of this manual:

✂✂	Appendix A:	Maintenance and Customer Service
✂✂	Appendix B:	Soft Key Layout Chart
✂✂	Appendix C:	Hand Held Remote Operation Instructions
✂✂	Appendix D:	MIDI Interface
✂✂	Appendix E:	ColorNet™ Remote Video
✂✂	Appendix F:	Encore Console Specifications
✂✂	Appendix G:	Auxiliary Monitor

ENCORE USER GUIDE

PART I:

GETTING STARTED

CHAPTER 1

Setting Up Your Console

CHAPTER 1:

Setting Up Your Console

Step 1: Unpacking


Carefully unpack your console from its carton. Underneath the console, you will find:

- ✂✂ This manual
- ✂✂ A 7' AC power cable
- ✂✂ One 3.5", 1.44MB floppy show storage disk
- ✂✂ One 3.5", 1.44MB floppy disk containing the console operating program
- ✂✂ One 3.5", 1.44MB floppy disk containing the Help file
- ✂✂ 1 or 2 gooseneck Worklight fixtures (if the option was ordered)

In a separate shipping container, you will find the console monitor. Carefully inspect all items for evidence of shipping damage. If any damage is noted, call the shipping company for an inspection. It is recommended that you keep the shipping containers in case you need to transport your console in the future.

Step 2: Set Up

Place your console on a sturdy horizontal surface with at least 6" (152mm) of clearance behind the console for cables and for proper ventilation. The environment should be dust-free with an ambient temperature of 40°F (4°C) to 90°F (32°C) and a relative humidity between 8% to 80% without condensation.

 **WARNING!!** *Do not run the console while it is in a road case, or damage may occur.*

Do not expose console to rain or moisture, or damage may occur.

Place your monitor on a sturdy surface near the console in accordance with the instructions provided by the monitor manufacturer.

Step 3: Power Connections

Power Supply Specifications: The console has an auto-ranging power supply designed to operate on AC power at any nominal voltage between

100V and 240V, 50Hz or 60Hz. The power supply requires a maximum of 4A (480 Watts). In the USA and Canada, it is intended that the console be operated at 120V only, and a power cord with a NEMA/CSA 5-15P plug (Edison, parallel blade type) is supplied for this purpose. In other countries with different connector systems and/or operating voltages, you must use a power cord with plug rated for at least 4A and at least the nominal operating voltage of that country. The mating connector to the console is a female IEC 320, Sheet C13 connector rated at 10A, 250V.

Console Power Connection: First make sure the key switch is in the OFF position, then plug the AC power cable into the console. Plug the other end into an AC power source with a rating in compliance with the above requirements, and with a computer grade ground. (A computer grade ground is an insulated, isolated ground preferably connected to the point where the AC power source is grounded in the building.)

Back Panel Power Outlets: On the back panel of the console are two switched female IEC 320 style power outlet connectors for connecting the monitor, or other peripheral devices. The connectors are rated voltage-wise and frequency-wise at the same voltage and frequency being supplied to the console via the console power supply cord, and collectively at 3A total for the two switched outlets.

Monitor Power Connection: Your monitor is also typically an auto-ranging unit, operating on AC power anywhere from 100V to 250V, 50Hz or 60Hz at a current of 1A maximum. The monitor is provided with a mating "reverse" IEC 320 style plug. Refer to the instructions provided with the monitor to find out whether the monitor is suitable for operation with the above specified connectors. If so, plug the power cord of the monitor into one of the console power connectors.

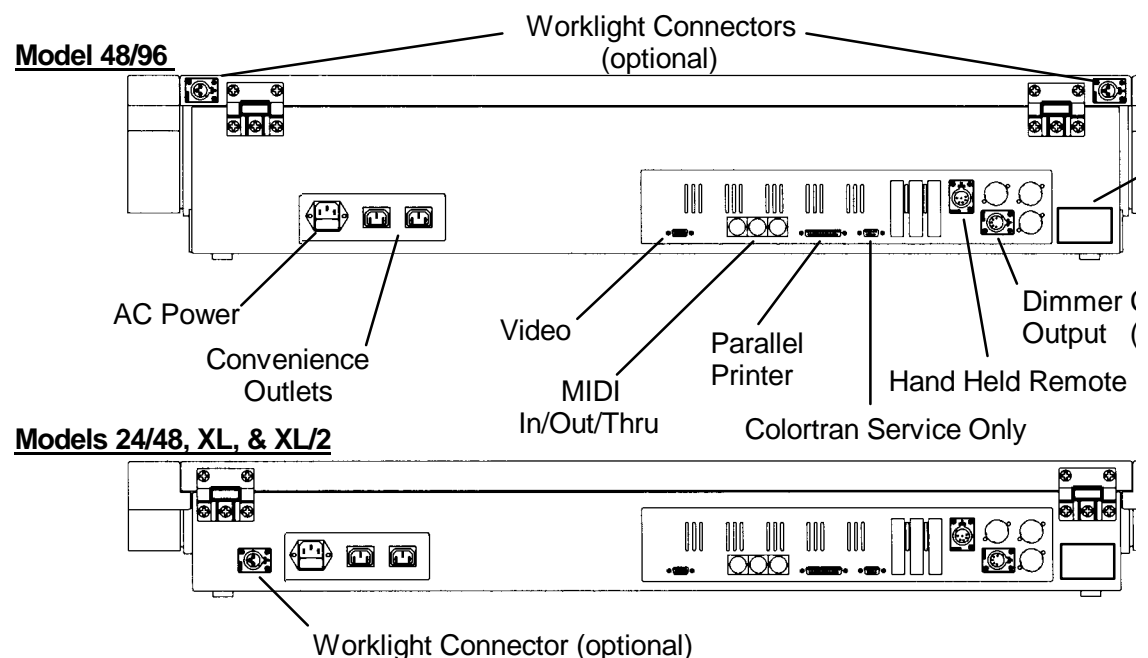


Figure 1.1, Encore Back Panels








Step 4: Control Connections


A label on the back panel of the console identifies all control connections. (See Figure 1.1.) They are all Class 2 low voltage circuits (extra-low voltage in some parts of the world).

Monitor Connection: The monitor is supplied with a control cable terminated in a high-density 15-pin "D" connector. Connect the monitor control cable to the console connector marked VIDEO. The VIDEO connector is a computer industry standard SVGA control connector. You can secure the connector with a small, flat blade screwdriver, or in some cases, with built-in hand-screws.

Dimmer Rack Connection: Since the purpose of the console is to control dimmers, you must connect the console to the dimmer rack via the DMX connector(s) on the back panel (standard 5 pin XLR type female connectors). The DMX signals comply with the USITT DMX 512-1990 standard (except that pins 4 and 5 are not used for a second RS485 data transmission channel; pin 4 is not connected, and pin 5 is use for an analog over-temp signal). The DMX 1 connector contains data for dimmers 1 through 512, and the optional second connector, DMX 2, contains data for dimmers 513 through 1024. Connect Colortran dimmer pack control cables or control cables previously wired to Colortran dimmer racks to the DMX console connectors.

Peripheral Devices: If desired, peripheral devices may be connected to the console back panel connectors as follows:


 Printer	= Computer industry standard parallel
 printer connector.	
 Hand Held Remote	= Accepts Colortran Model No.7-2021
 Hand Held Remote.	
 MIDI	= Industry standard Musical Instrument
 Digital Interface	
 Service Use Only	= For Colortran service personnel only


 **ADVANCED TOPICS:** For information on Hand Held Remote, see *Appendix C*. For information on MIDI, see *Appendix D*.

Step 5: Worklights

Worklights are optional console accessories. The worklight plugs into the 3-pin XLR style connector on the right rear of the console. The Encore model 48/96 is supplied with a second worklight that plugs into the connector on the left rear of the console. The rotary control knob for the worklight intensity is on the top panel just below the blackout switch.

Step 6: Energizing the Console

 **WARNING!!** Do not consume food or beverages while operating the console, because lethal voltages (120V or 220V) exist inside the console. Spills may cause a hazardous condition, or may cause damage to the console.

 **CAUTION!** When the console has been stored in a cold environment (below 40°F), do not turn the power on until the console warms up, or else damage to the console may occur. You should avoid situations that could cause condensation to occur inside the console.

Turning on the Monitor: Once the console and monitor have come to room temperature (about 25°C or 75°F) the console is ready to be turned on. Refer to the instructions provided with the monitor and turn on its power switch. If you plug the monitor into a convenience outlet on the rear of the console, you can leave the monitor power switch turned on because the convenience outlet on the console is a "switched" outlet (it turns off when the console is turned off).

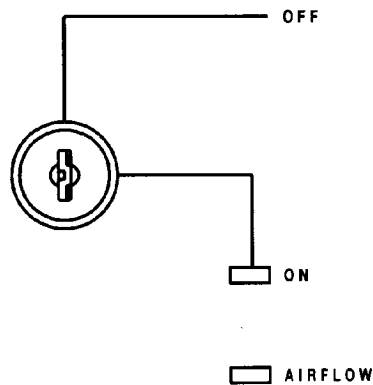


Figure 1.2, Power-On Key Switch

Turning on the Console: Next, turn on the console key switch located on the upper right hand corner of the control panel. The ON indicator LED should illuminate. Within about ten seconds, the monitor should warm up and show one of the console displays. Refer to the instructions provided with the monitor to adjust its display. You may remove the key from the Key Switch while the switch is in either position.

Step 7: Operating the Console

Use this manual when you have questions about how to operate the console. The User Guide Part II covers Fundamentals of Operation. The User Guide Part III covers Advanced Topics. The User Guide Appendices cover special topics in depth such as Encore options and specifications. The Reference Section in the back of this manual contains a comprehensive alphabetic listing of all hard keys, soft keys, and related topics. If you are not able to find the answer in the User Guide or the Reference Section of this manual, call Colortran Field Service. Please have the following information available when you call:

- ✍✍ Console model number, configuration number (if any), and serial number as found on the labels on the back panel of the console.
- ✍✍ Console software version number as shown at the top of the Setup display.
- ✍✍ Any accessories or peripherals attached to your system.
- ✍✍ Dimmer types that the console is operating.

The Colortran Field Service number is (800) 959-6004.

ENCORE USER GUIDE

PART II:

Fundamentals of Operation

CHAPTER 2	Basic Console Conventions
CHAPTER 3	Displays
CHAPTER 4	Console System Setup
CHAPTER 5	Setting Up the Soft Patch
CHAPTER 6	Setting Channel Levels
CHAPTER 7	Basic Submaster Operation
CHAPTER 8	Creating and Recording Cues
CHAPTER 9	Playing Back Cues
CHAPTER 10	Editing Cues and Using Track Modes
CHAPTER 11	Names
CHAPTER 12	Utilities, Warnings, Printing, and Default Settings

CHAPTER 2:

Basic Console Conventions

Terminology Definitions

Lighting Console: A lighting console is a tool that creates lighting patterns and effects, and records them so they may be reproduced later. Simply put, the console controls what is seen on stage.

Show: A show is the largest unit of memory. Only one show is ever active in the console at any given time. Shows can be stored on standard 3.5" computer floppy disks as **show files**. These files can be retrieved from floppy disks and loaded back into the console's active memory in whole or in part. Shows are composed of cues, effects, groups, submasters, macros, profiles, the patch table assignment, and the system setup.

Cue: Cues are recorded lighting changes or "looks" that can be reproduced with specific timing. Cues are numbered and are usually "played back" in a numbered sequential order. Cues can be recorded and edited.

Effect: Effects are continuous repeating patterns of lighting changes that can be assigned to cues or played back independently. The rate and pattern of an effect can be recorded and edited.

Channels: Cues, effects, groups, and submasters are composed of selected **control channels**, simply referred to as channels. Channels are used for setting lights to various intensity levels.

Level: A level refers to the intensity of any lighting instrument that is controlled by a given channel. A level is indicated by a percentage of the maximum output of a given channel, from zero (00) to Full (FL). The level number indicates the percentage of the maximum output, i.e. a channel level of 55 indicates that instruments controlled by the channel are at 55% of their maximum intensity.

Assignment of Channels to Dimmers: Channels are assigned to control specific **dimmers**. Dimmers are the actual hardware devices that feed electricity into the circuits that feed your lighting instruments. In some venues, different circuits can be physically plugged into specific dimmer outputs, providing what is called a "hard patch". With the Encore console, you can assign any channel to control one or more dimmers through what is called a "soft patch".



ADVANCED TOPICS: See Chapter 5, *Setting Up The Soft Patch*.

Dimmer Control Channel: A dimmer control channel is a logical address in the dimmer control signal transmitted from the console. This dimmer control signal is a digital signal that contains information about many dimmer control channels. The dimmer control signal can be used to control actual dimmers or it can control other devices, such as automated fixtures and color scrollers. Since the majority of applications have actual dimmers controlled by the dimmer control signal, we use the term "**dimmer**" to refer to a dimmer control channel. When you see the word "**dimmer**" in this manual, or on the display monitor, it really means dimmer control channel.

Dimmer Protocols: There are different types of dimmer control signals, also known as dimmer protocols. The current standard for dimmer protocols is known as DMX-512, and was developed by the United States Institute for Theater Technology. The Encore console can transmit DMX-512, or CMX (Colortran protocol), each of which contains up to 512 dimmer control channels, which may address either actual dimmers or other automated devices.

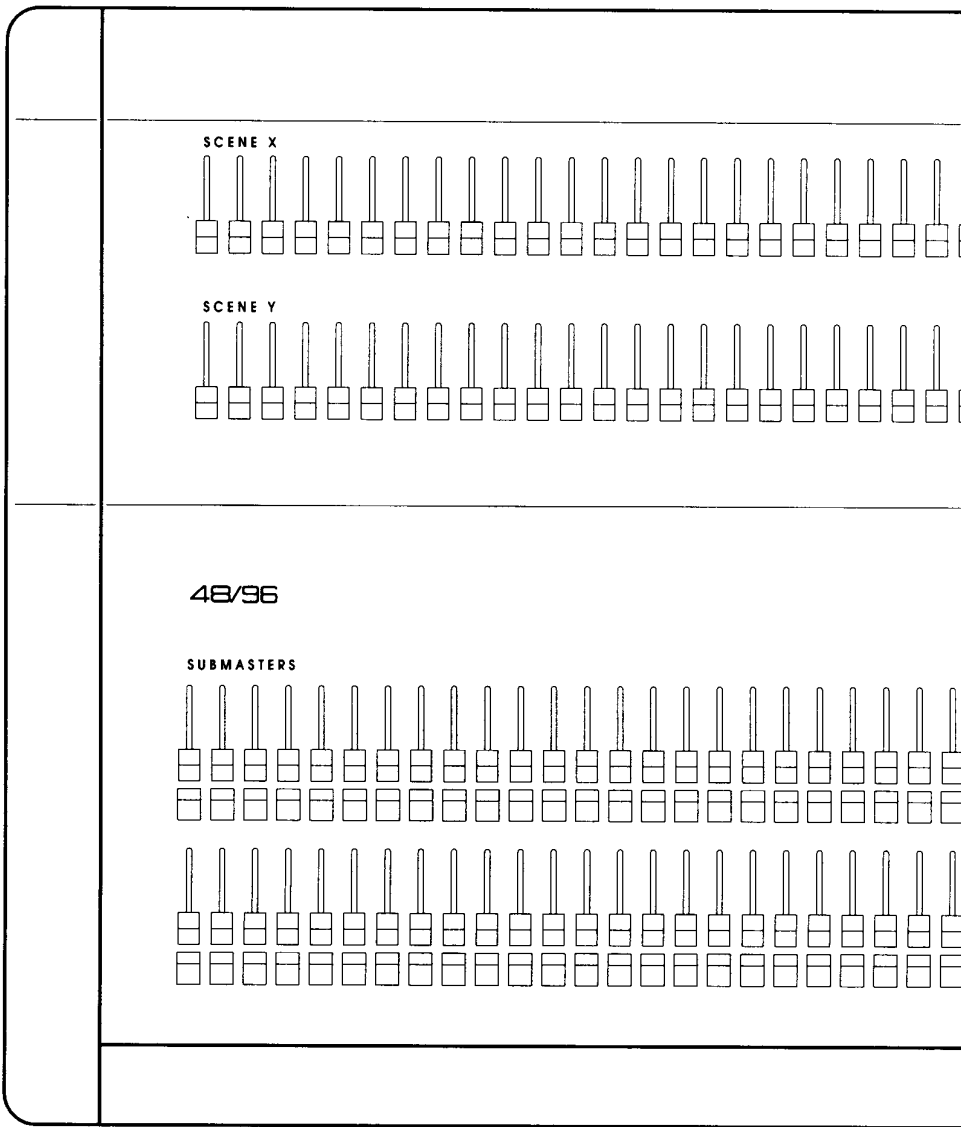


Figure 2.1.a, Encore Console Controls, Left Side

Console Controls

(See Figure 2.1). The main functional groups of console controls are as follows:

✍✍ **Submaster faders** and their **Bump buttons** are on the left side.

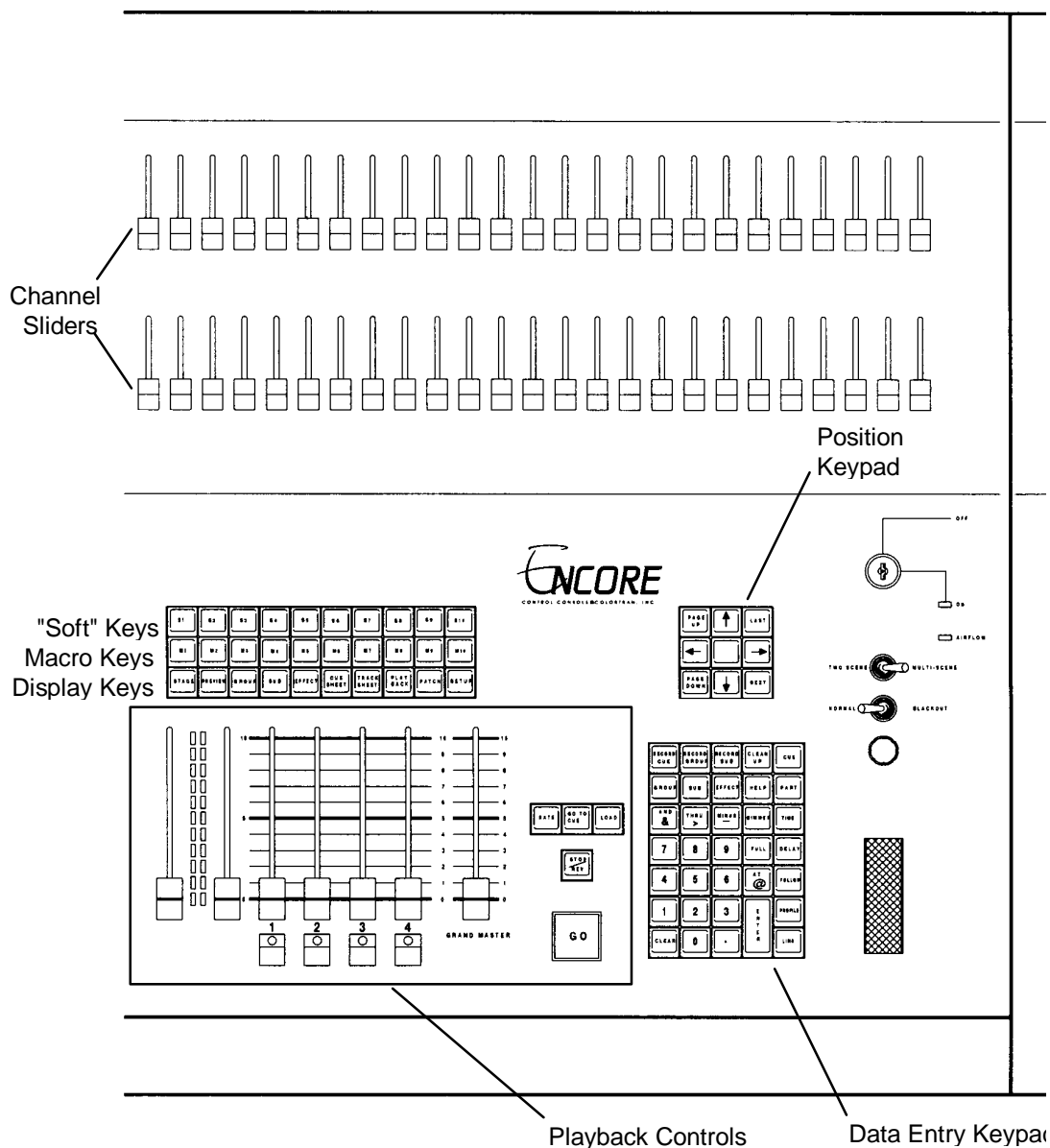


Figure 2.1.b, Encore Console Controls, Right Side

- ✂✂ **Playback controls** are in the lower center.
- ✂✂ **Display keys** are in the upper center.
- ✂✂ **Position Keypad** is in the upper right.
- ✂✂ **Data Entry Keypad** is in the lower right.

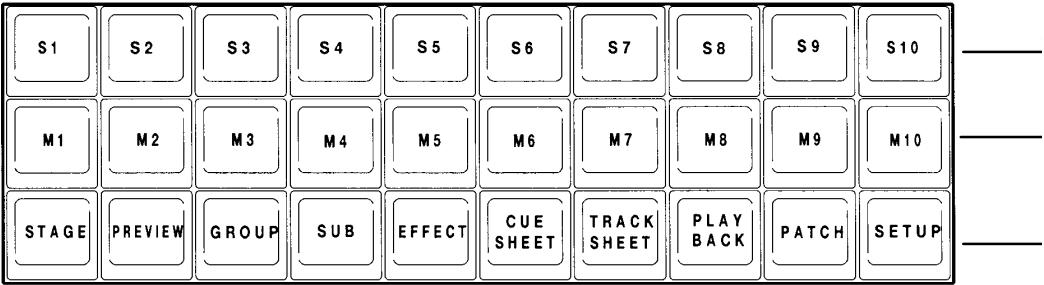



Figure 2.2, Soft, Macro, and Display Keys

Display Keys

The Display keys are used to select the display on the video monitor screen. There is one row of Display keys. Each key is labeled with the name of the display that appears when the key is pressed. There are more than 10 displays available, but some of these are actually subdisplays of the 10 main displays. Subdisplays are available through soft keys in the main displays.

 **ADVANCED TOPIC:** For a complete listing of all displays, see Chapter 3, *Displays*.

Macro Keys

The Macro keys are a time and effort-saving feature. They are used to play back a series of recorded keystrokes. Each Macro key can record a sequence of up to 128 keystrokes. The sequence can then be re-executed at a later time by simply pressing the assigned Macro key.

 **ADVANCED TOPIC:** See Chapter 21, *Macros*.

Hard Keys vs. Soft Keys

Hard Keys: Hard keys are the keys on the console that always have the same function. Hard keys are labeled with the name of the function that the key performs.

Soft Keys: Soft keys are ten keys on the console that do not always have the same function. (See Figure 2.2.) The soft key functions are different for

each display; their functions depend upon the display you are currently working in. At the bottom of the screen (in all displays except Playback), there is a row of ten squares that represent the ten soft keys for the current display. (See Figure 2.3.) Each of the ten squares is labeled with its soft key function name. The ten squares are numbered S1 - S10, just like the ten soft keys on the console.

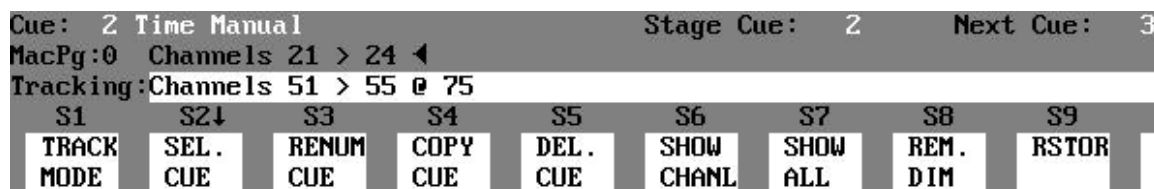





Figure 2.3, Soft Keys and Command Line

Whenever you change displays, you will notice that some or all of the soft key labels change function names. Sometimes the soft keys will change when you press a hard key or a soft key. As you use your Encore console, you will find that you have the right soft key available when you need it. The labels names are designed to communicate the function of the soft key, without having to refer to this manual. The main idea behind the soft keys is to provide you with only the functions needed in a particular display, without cluttering the top panel with too many keys.

 **NOTE:** In this manual, actual key names and keystroke entries appear in all capital letters. Soft keys appear inside parentheses: (SOFT KEY). Hard keys appear inside brackets: [HARD KEY].

 **EXAMPLE:** The Record Submaster hard key appears like this:
[RECORD SUB]


The Track Mode soft key appears like this: (TRACK MODE)
The Decimal Point hard key appears like this: [.]
The AND hard key appears like this: [+]
The THRU hard key appears like this: [>]
The MINUS hard key appears like this: [-]
The AT hard key appears like this: [@]

 **NOTE:** The [AND] key on your console may be labeled "AND &" on the key itself. In the Command Line this keystroke always appears as "+".

Some soft keys appear with a "down arrow" pointer next to them (?). This indicates that the soft keys will change to another level of functions when you press this key. To return to the previous level of soft key functions, press the [CLEAR] key or the display key of the current display.

Command Line and Its Syntax

The commands you enter into the console appear in the Command Line. The Command Line is visible near the bottom of the monitor screen, just above the soft keys. (See Figure 2.3.) A command is entered by pressing a sequence of different soft keys and hard keys. Every keystroke you make appears on the Command Line, creating a "sentence" that becomes a command for the console. Your command is then completed by pressing the [ENTER] key, at which time the console executes the command.

 **EXAMPLE:** A command to set channel 7 at a level of 75 percent is:

[7] [@] [75] [ENTER] (Command Line History shows "Channel 7 @ 75")

? **BASIC RULE:** *There is no channel key, therefore anytime a number is entered at the beginning of the Command Line, "Channel" is automatically entered onto the Command Line. Use the At [@] key to signify a channel level or patching assignment. The [@] key can be roughly translated as "at the level of" or "patched to".*

? **BASIC RULE:** *Before you execute a command by pressing the [ENTER] key, you can use the [CLEAR] key to erase keystrokes in the Command Line. The keystroke immediately to the left of the cursor is erased from the Command Line when the [CLEAR] key is pressed. You can also use the Left and Right Arrow keys on the Position Keypad to move the cursor around in the Command Line.*

Command Line History

After pressing the [ENTER] key in the Example above, you will notice that your command "sentence" moves up one line on the display, and appears in gray text. The entered command is now in the position on the screen called the Command Line History. The Command Line History provides you with a copy of the last command that was entered. You cannot manipulate the information in the Command Line History; it just shows what command you last entered.

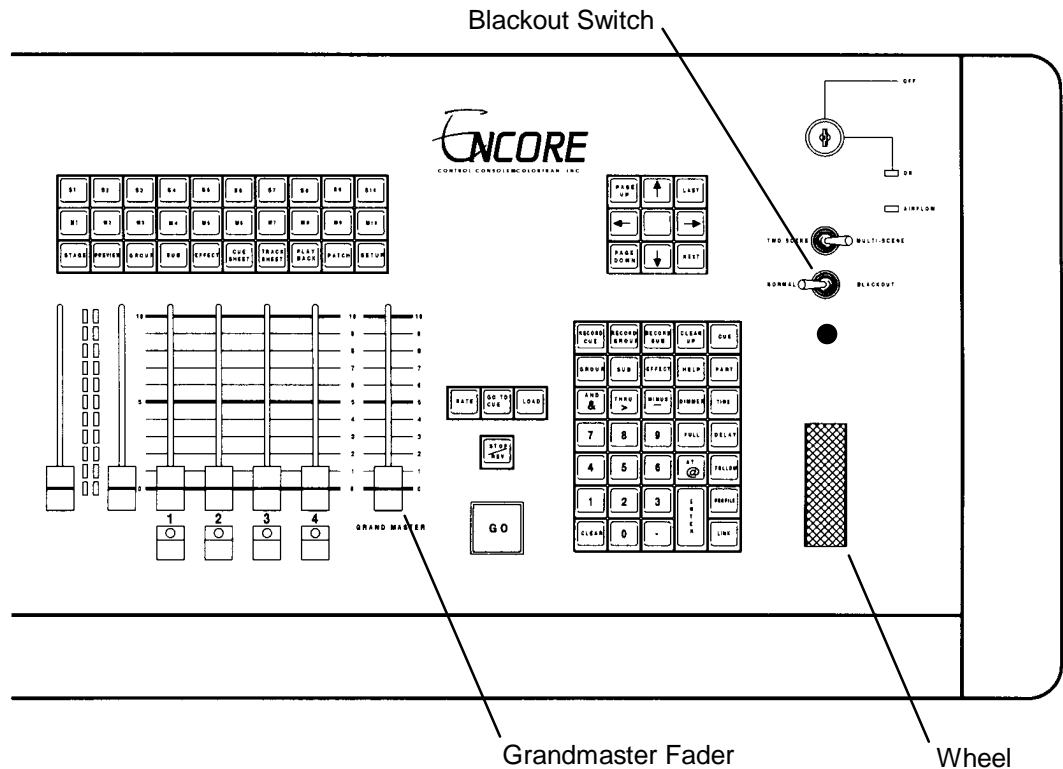



Figure 2.4, Console Wheel, Grandmaster, and Blackout Controls.

Captured Channels / Wheel Control

When you have set channel levels on the Command Line, the channels are "captured", and are shown in cyan (aqua colored) reverse video. Captured channels are under control of the wheel. Use the wheel to increase or decrease the levels of captured channels in a continuous proportional manner. This means that captured channels at different levels still maintain their proportions with respect to each other. Captured channels remain "on the wheel" until you select other channels or press the [CLEAR] key.

The captured channel levels can also be set by entering a new level value with the Data Entry Keypad. In this case, there is no need to enter channel numbers because the console automatically assigns the new levels to the **captured** channels.

 **EXAMPLE:** To assign a level of 50% to channels 1 - 10, then change to 80%:

1. [1] [>] [10] [@] [50] [ENTER]
2. [@] [80] [ENTER]

- or -

Move the wheel until the channels read 80%.



ADVANCED TOPICS: See Chapter 6, *Setting Channel Levels*.

You can also use the wheel to control the rates of fades on the playback faders, as well as the rates of effects on submasters or playback faders.



ADVANCED TOPICS: See Chapter 22, *Controlling Fade And Effect Rates With The Wheel*.

Grandmaster Fader

You can use the Grandmaster fader to proportionally control the output of all the channels. The slider "masters" all of the channel levels that are live on stage. When the Grandmaster is restored to its original position, all channels return to their previous levels.



NOTE: *Neither Parked dimmers nor Automated channels are controlled by the Grandmaster.*




ADVANCED TOPIC: See the Parking Dimmers topic in Chapter 20, *Advanced Patching Options*.




ADVANCED TOPICS: See the Automated Channels topic in Chapter 5, *Setting Up The Soft Patch*, and in Chapter 20, *Advanced Patching Options*.

Blackout Switch

You can use the Blackout switch to control the output to all the channels with an on/off toggle function. Set the switch to BLACKOUT to immediately take out all the lights on stage. Set the Blackout switch to NORMAL to return to the previous levels. The Blackout switch function is the same as instantly moving the Grandmaster slider between full and zero.

 **NOTE:** *Neither Parked dimmers nor Automated channels are affected by the Blackout switch.*

 **HINT:** *Just to the right of the Playback Fader Boxes (in both the Playback and the Stage displays), there is a level indicator box. It shows the current level of the Grandmaster. Whenever the Grandmaster level drops below full, the level indicated in this box flashes. If the Grandmaster reaches zero, the level shows as the red flashing letters "B.O." (Blackout) to indicate a blackout condition on the stage. The flashing red "B.O." also occurs when the Blackout switch is in the Blackout position.*

Console Memory

When you turn off your console, the console "remembers" the cues and all other show information, so that when you turn the console back on, all the show information from the previous session is still there. The show information is stored in RAM (Random Access Memory) which remains active by an internal backup battery when the console is turned off. If the console does not remember the previous show, the battery may need to be replaced.

The console checks the show data stored in RAM each time power is turned on. If the console detects invalid data, a warning message appears on the display stating that the battery may need replacing. (See Figure 2.5.)

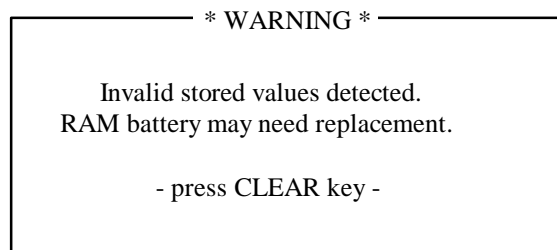



Figure 2.5, Bad Battery Warning

 **ADVANCED TOPIC:** To change the internal battery, see Appendix A, *Maintenance And Customer Service*.

Record Disk /Load Disk

The current show data can be recorded from RAM onto a standard 3.5" 1.44MB High Density floppy disk for storage. You can then retrieve show data from the floppy disk. The disk drive is located under the front edge of the console.



ADVANCED TOPICS: To record and retrieve show data, see Chapter 13, *Memory*.

CHAPTER 3:

Displays

The Basic Display

There are two "live" displays where edits are seen live on stage as they are made. The live displays are:

- ✂✂ Stage display
- ✂✂ Playback display

There are eight "blind" displays where edits are not seen live on stage. The blind displays are:

- ✂✂ Preview display
- ✂✂ Group display
- ✂✂ Submaster display
- ✂✂ Effect display
- ✂✂ Cuesheet display
- ✂✂ Tracksheet display
- ✂✂ Patch display
- ✂✂ Setup display

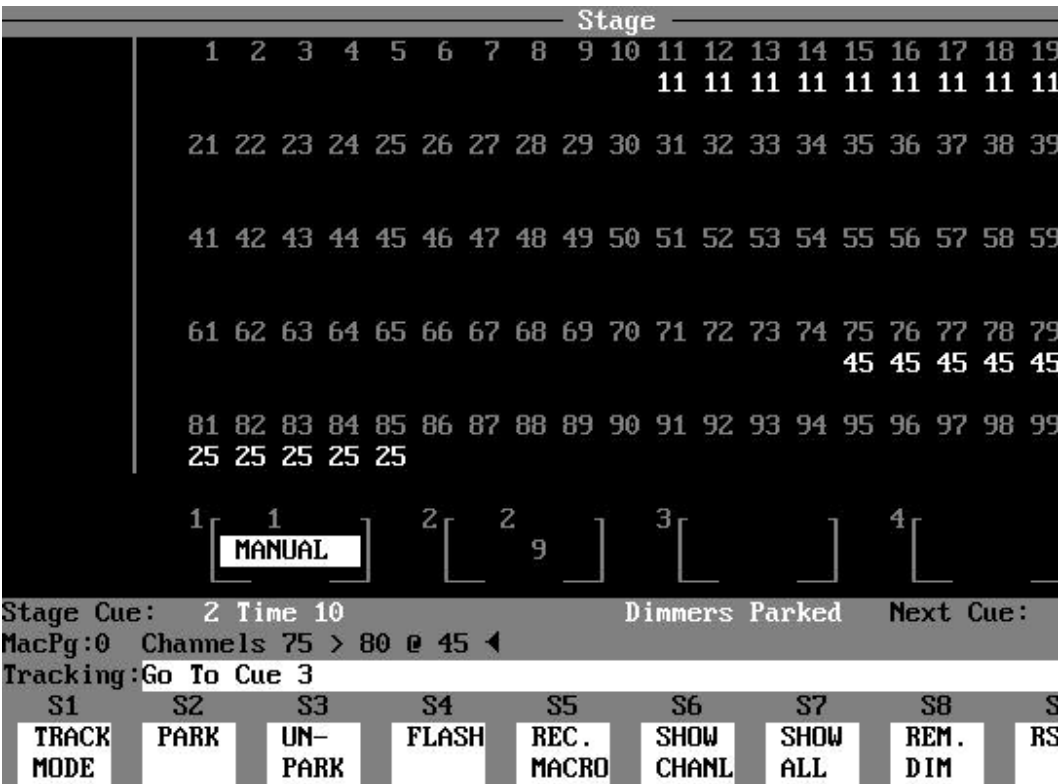




Figure 3.1, Basic Display


Title Bar: The Title Bar is located across the top of the display. The Title Bar contains the name of the display you are currently viewing. In the **blind** displays, the Title Bar is a **single cyan-colored horizontal line** on the black background. In the **live** displays, the Title Bar is **solid cyan with a black horizontal line** running through it.


? **HINT:** *The different looks of the live and blind displays is meant to help prevent the most common type of operator error, which occurs when an operator thought they were editing live levels on stage, when they were actually editing a cue in the Preview display.*


Status Bar: The Status Bar is located below the main part of the display. The Status Bar contains status information about what is being shown in the current display. Each display contains different types of information in its status bar, depending on what type of information is relevant to the current display. The primary information fields shown are:

 **Stage Cue:** shows the number of the current cue on stage.

 **Next Cue:** shows the number of the cue that is executed by the next press of the GO button (automatically taking cue links and link returns into account).

 **Mac Pg:** shows the number of the macro page (0 - 9) currently being accessed by the Macro Keys, [M1] - [M10]. Each Macro page contains ten macros that are executed by their respective macro keys.

 **ALPHA:** flashes in green when Bump buttons are set to alphabet character mode.

 **Dimmers Parked** message only appears when there are dimmers currently parked.

Command Line / Command Line History: Directly below the Status Bar are the Command Line History and the Command Line. The Command Line shows the command currently being entered. The Command Line History shows the last command that was executed.

Track Mode: The current Track mode appears in the field at the far left of the Command Line. One of the three Track modes will appear in the Track mode field:


 **Tracking**

 **Cue Only**

 **Clean Up**

Soft Key Labels: The Soft Key Labels, numbered S1 - S10, appear at the bottom of the display, and change function according to the current display. The functions of these soft keys are executed by pressing the respective console keys labeled (S1) - (S10).




Some of the soft keys reveal another level of soft keys. These keys are indicated by a “down pointer” character (?) next to their label. To return to the top level of soft keys in any display, press the display key for the current display (this also clears the Command Line).

 **EXAMPLE:** In the Effect display, pressing the (PATRN) soft key reveals the next level of soft keys under it that assign effect patterns. Pressing the [EFFECT] display hard key returns to the first level of Effect display soft keys, and clears the Command Line.

 **HINT:** *If you press the [CLEAR] key you will also return to the previous level of soft keys.*

Changing Displays

To change to a different display, press one of the ten display keys on the console. The hard display keys are listed below:

 [STAGE]	 [CUESHEET]
 [PREVIEW]	 [TRACKSHEET]
 [GROUP]	 [PLAYBACK]
 [SUBMASTER]	 [PATCH]
 [EFFECT]	 [SETUP]

The following subdisplay soft keys are available in the Patch display:

 (PROFL DISP.)	= Profile Editor subdisplay (also found in the Setup display)
 (NONDM DISP.)	= Non-Dim Dimmers subdisplay
 (PARK DISP.)	= Parked Dimmers subdisplay

Macro contents are displayed by pressing the (VIEW MACRO) soft key in the Setup display.



ADVANCED TOPICS: See Chapter 21, *Macros*.

Default Items

In many displays, one (or more) of the items listed is shown in reverse video. Items shown in reverse video are the default items in the list. This means that if you enter a command without specifying the item to act upon, the console will automatically insert the default item(s) into the Command Line.



EXAMPLE: In the Patch: By Channel display, assume channel 1 is shown in reverse video (it is the "current" channel). To patch channel 1 to dimmer 50:

[@] [50] [ENTER]

Moving Within Displays / Position Keypad

To move within a display, or to change the contents of the display, use the Position Keypad. (See Figure 3.2.)

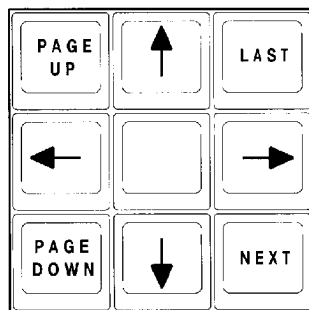


Figure 3.2, Position Keypad

The [LAST] and [NEXT] keys generally change the display to select the next or last item as the "current" item, such as the Effect or Submaster number that is displayed.

The Up and Down arrow keys generally scroll (move) the contents of the display vertically one line at a time. They move the current default selection in the Effect display **only**.

The Left and Right arrow keys move the Tracksheet display left or right 12 channels at a time to reveal other channels for viewing.

The [PAGE UP] and [PAGE DOWN] keys show the next or previous page of information.

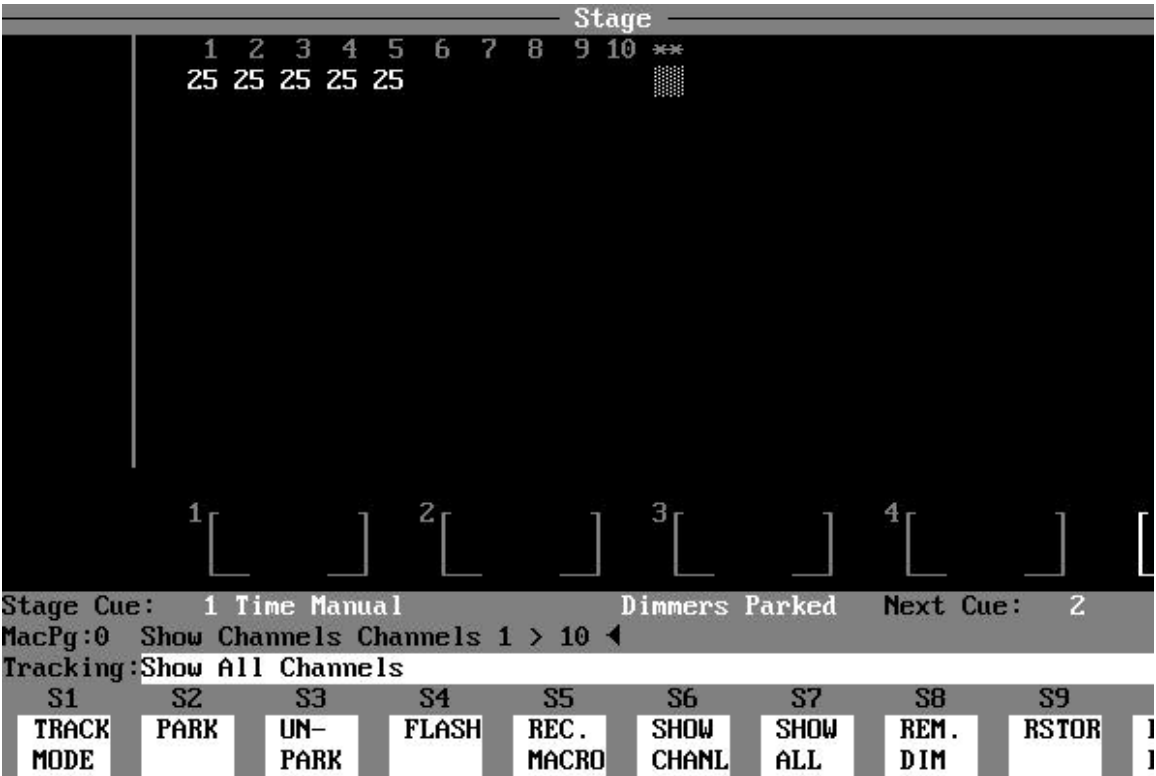





Figure 3.3, Channel Formatting


Channel Formatting

You can use the Show Channel (SHOW CHANL and Show All (SHOW ALL) soft keys to format the display of channels. The total number of channels is specified in the Setup display, or is determined by assigning the Two-Scene mode or Multi-Scene mode (for the Encore 24/48 and 48/96 models). When the (SHOW CHANL) soft key is pressed, the display is limited to show a subset of all possible channels, and the characters "***" appear in the display indicating that channels are not being shown. If a channel that is not shown has an active level, a block of "dots" is shown below the "***".






 **EXAMPLE:** To set up the display to only show channels 1 - 10:
(SHOW CHANL) [1] [>] [10] [ENTER]

 **EXAMPLE:** To set up the display to show all active (non-zero) channels:
(SHOW CHANL) [ENTER] (Do not specify a channel list.)


 **NOTE:** *In the previous example, if no channels are currently captured, then all active channels are displayed. If any channels are captured, only they are shown.*

 **EXAMPLE:** To show all channels, or all pages of channels:
(SHOW ALL) [ENTER]

The (SHOW CHANL) and (SHOW ALL) soft keys are available in the following five "channel" displays:

 **Preview**
 **Stage**
 **Submaster**
 **Group**
 **Tracksheet**

The Show Channel and Show All commands are global - the channels selected for display are the same for all five channel displays. The Patch and Effect displays are not affected by limiting the number of channels displayed. Any printouts are also limited to the channels that are shown in the displays at the time of the printing command.

 **BASIC RULE:** *Display formatting is temporary and does not affect memory, or console output. However, display formatting **does** affect printouts of show information.*

The Stage Display (a live display)

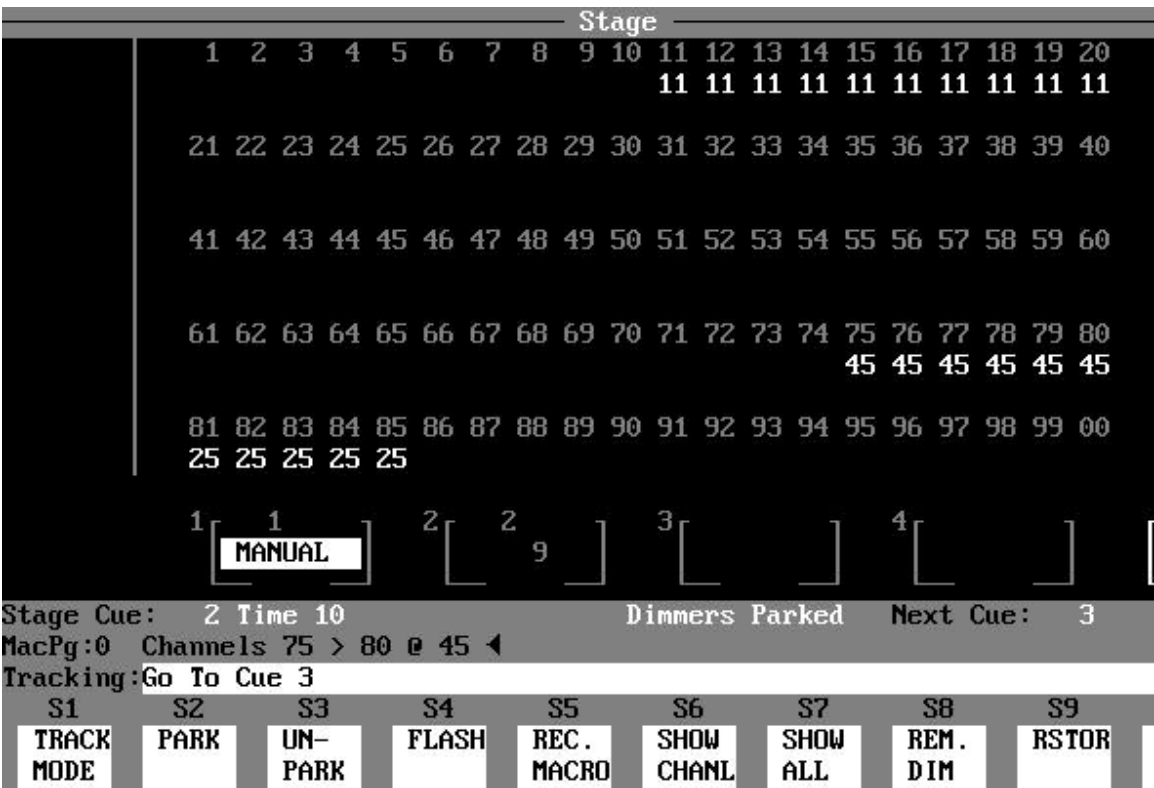




Figure 3.4 , Stage Display








Purpose of the Stage Display: The Stage display is a representation of the current lighting levels being output live on stage to the dimmer rack. Changes made to the levels directly affect the lights on stage, so you can see what the changes look like. Changes to light levels are monitored and updated instantly on the Stage display as the changes are made. A Record command takes a "snapshot" of all channel levels that appear in the Stage display. The Stage display also indicates the status of any running or fading effects, and fading cues.


Live Channels “on Stage”: In the main area of the display are the channel numbers and their levels as seen “live on stage”. Paging with the Position Keypad while in the Stage display affects only this area of the display.


The channel numbers are located in rows across the screen, and appear in different colors as follows:

 cyan	= Normal channels
 magenta	= Automated channels

The level number of each channel is located below its respective channel number. The lack of a level number indicates a level of zero. The levels appear in different colors according to the code described below:

 red	= Higher level in current cue than last executed cue.
 blue	= Lower level in current cue than last executed cue
 white	= Same level as last executed cue and not tracking.
 gray	= Tracking same level as last executed cue.
	- or - = Channel fader controls the level directly.
	- or - = Channel control was released from keypad or wheel control.
 yellow	= Effect controls the channel.
 green	= Submaster controls the channel.
 cyan block	= Wheel controls the channel level directly (level shown in white in an aqua block).

 **NOTE:** *The only live levels that do not appear in the Stage display are levels from dimmers that have been Parked. These Parked dimmers can be viewed in the Patch: Parked Dimmers subdisplay.*

 **ADVANCED TOPIC:** See the Parked Dimmers topic in Chapter 20, *Advanced Patching Options*.

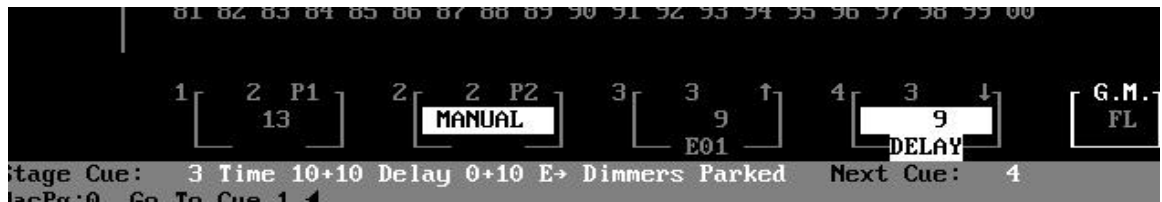


Figure 3.5, Playback Fader Boxes

Playback Fader Boxes: The four Playback Fader Boxes numbered 1 - 4 are located above the Status Bar on the Stage display screen. The Playback Fader Boxes indicate the current status of any cues actively fading, or any running cue effects. When a cue is executed by pressing the GO button or using the [GO TO CUE] key, it is automatically loaded onto the lowest available Playback Fader.

The Playback Fader Boxes contain the following information:

- ✂ **Cue number** (the number on the top line of the box).
- ✂ **Cue Part number** represented by the letter "P" before a number.
- ✂ "?" indicates the **up fade** of a split fade cue.
- ✂ "?" indicates the **down fade** of a split fade cue.
- ✂ **Fade time** remaining is shown on the middle line of the box
- or -
"MANUAL" appears in reverse video when the fade is manually controlled.
- ✂ **Delay time** of the fade on the playback fader. ("DELAY" appears in reverse video when the fade is in the process of counting down its delay time.)
- ✂ **Effect number** of the fade on the playback fader
- ✂ "?" next to the effect number indicates a **fade effect** (no arrow indicates a cue effect).

✂ **NOTE:** For manual cues, the word "MANUAL" starts to blink when you move the fader handle from the zero position.

Grandmaster Fader Box: To the right of the playback fader information is the Grandmaster Fader Box. It indicates the level of the Grandmaster, anywhere from 100% (FL=Full Level) to 0% (B.O.=Black Out). The Blackout switch will also cause this indicator to read "B.O.". The Grandmaster level blinks anytime it is set below Full.

Status Bar: Below the four Playback and the Grandmaster Fader Boxes is the Status Bar. The Status Bar contains the following fields for information:

- ✂✂ **Stage Cue:** shows the number of the current cue on stage.
- ✂✂ **Next Cue:** shows the next cue number to be executed when the GO button is pressed.
- ✂✂ **Mac Pg:** shows the number of the macro page (0 - 9) currently being accessed.
- ✂✂ **Dimmers Parked** message only shows when there are dimmers currently parked.

Command Line / Command Line History: Directly below the Status Bar are the Command Line History and the Command Line. The Command Line shows the command currently being entered. The Command Line History shows the last command executed.

Track Mode: The current Track mode (Tracking, Cue Only or Clean Up) is shown at the far left of the Command Line.

Soft Key Labels: The Soft Key Labels are located directly below the Command Line. The Soft Key Labels describe the function of each soft key. The function commands are executed by pressing one of the soft keys, (S1) - (S10), on the console. The functions of the soft keys change for each display.

The Preview Display (a blind display)

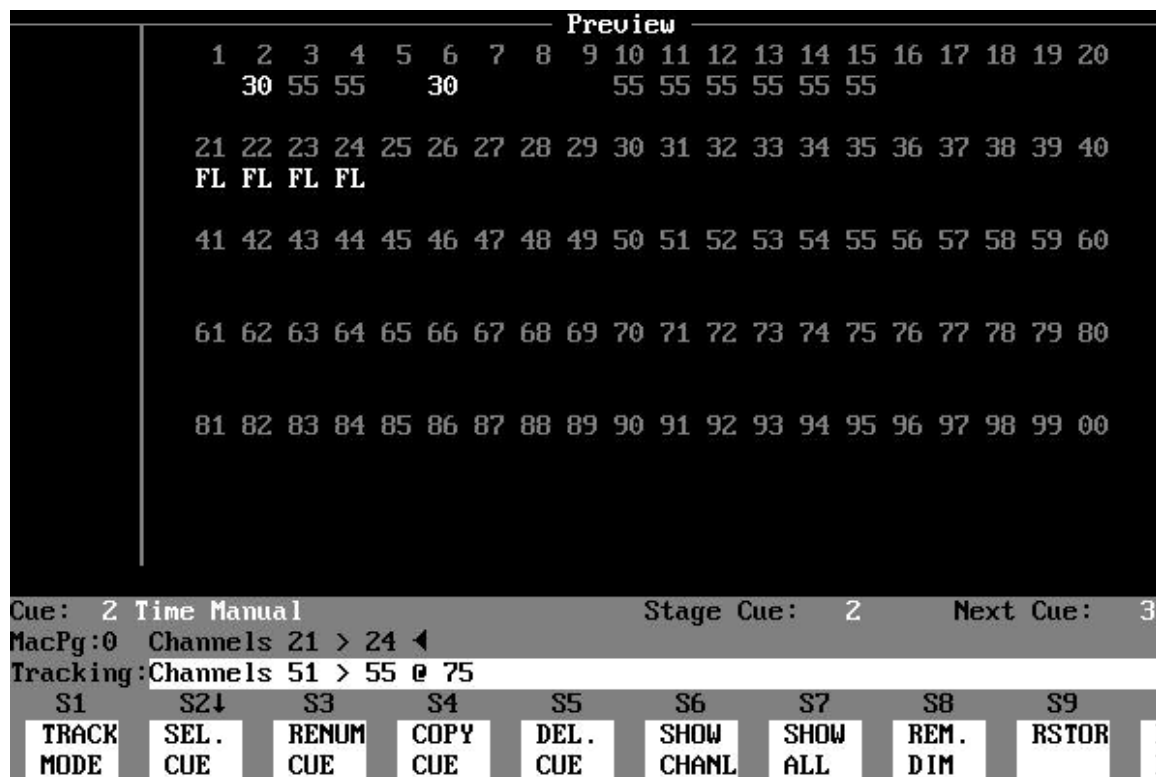






Figure 3.6, Preview Display

Purpose of the Preview Display: The Preview display shows the recorded channel levels of a cue. Cues may be created and edited in the Preview display. This is referred to as working in the "blind," because none of the channel levels shown in this display can be seen as light output on the stage while in the Preview display. Any edits to channel levels or cue attributes are **automatically recorded** as they are entered (the Record Cue command is not necessary to create or edit cues in the Preview display).





Contents of the Preview Display: The Preview display shows the channel levels of any recorded cue. The upper part of the display shows channels and their respective levels. The channel numbers are located above the levels, and appear in the following colors:

/ / cyan	= Normal channels
/ / magenta	= Automated channels

The numbers below each channel number is the level of that channel in the cue being previewed. The levels are shown in different colors according to the code described below:

 red	= Higher level than the previous cue
 blue	= Lower level than the previous cue
 white	= Non-tracking (or "hard" level), same level as last cue
 gray	= Tracking (or "soft" level), same level as last cue

Status Bar: The Status Bar is located below the main channel and level information area. The Status Bar contains the following fields for information:

-  **Cue:** shows the current preview cue being viewed and edited.
-  **Stage Cue:** shows the last cue executed on stage.
-  **Next Cue:** shows the next cue number to be executed when the GO button is pressed.
-  **Mac Pg:** shows the number of the macro page (0 - 9) currently being accessed.

Command Line / Command Line History: Directly below the Status Bar are the Command Line History and the Command Line. The Command Line displays the command currently being entered. The Command Line History shows the last command executed.

Track Mode: The current Track mode (Cue Only, Tracking or Clean Up) is shown at the far left of the Command Line.

Soft Key Labels: The Soft Key Labels are located directly below the Command Line. The Soft Key Labels describe the function of each soft key. The function commands are executed by pressing one of the soft keys, (S1) - (S10), on the console. The functions of the soft keys change for each display.

The Group Display (a blind display)

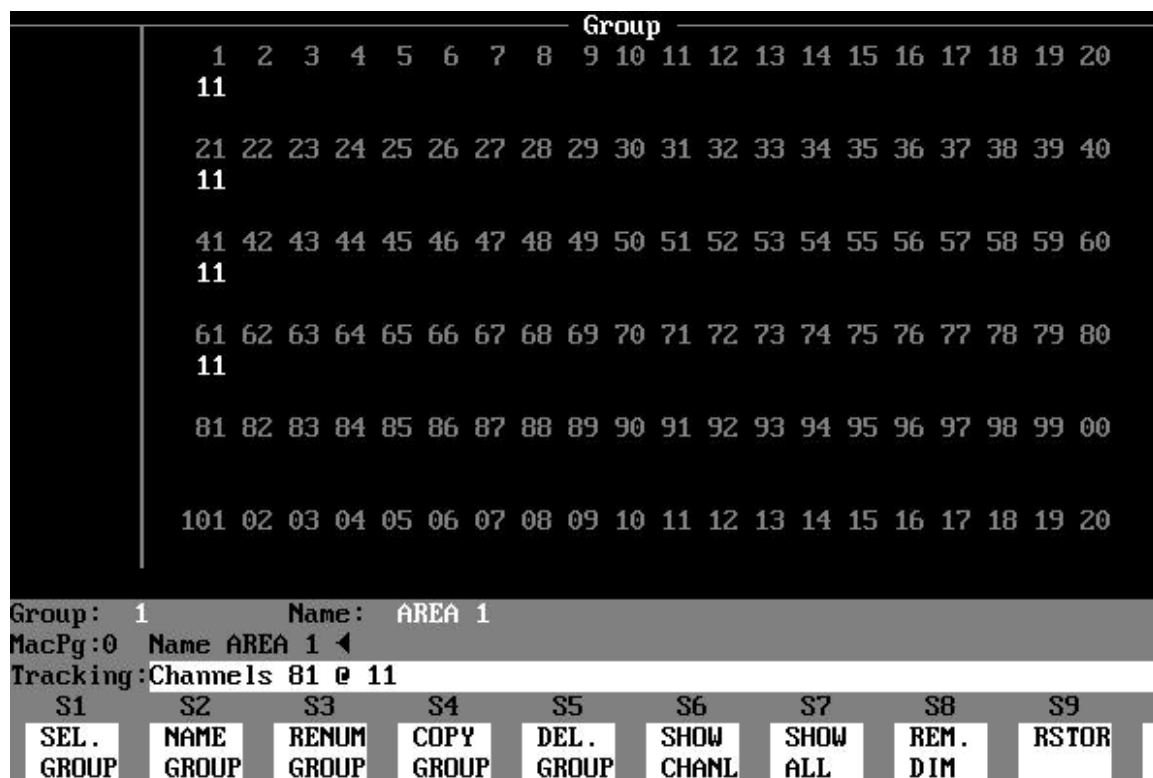




Figure 3.7, Group Display

Purpose of the Group Display: The Group display shows the channel levels assigned to all existing groups. A group is a collection of channels set at levels that may be created or edited in this display. A group is just like a submaster but without the slider control. Groups are "building blocks" used to create cues, effects or submasters. All edits to channel levels are recorded as they are made (the Record Group command is not necessary to create or edit groups while in the Group display).

Contents of the Group Display: The Group display shows the channel levels of any recorded Group. The upper part of the display shows rows of channels and their respective levels. The channel numbers, located above the levels, appear in the following colors:

 cyan	= Normal channels
 magenta	= Automated channels

The numbers below each channel number is the level of each channel. If no level is listed, the level is zero.

Status Bar: The Status Bar is located below the channel and level information area of the display. The Status Bar contains the following fields for information:

- ✂ **Group:** shows the current Group being viewed and edited.
- ✂ **Name:** shows the name of the current group.
- ✂ **Mac Pg:** shows the number of the macro page (0 - 9) currently being accessed.

Track Mode: The current Track mode (Cue Only, Tracking or Clean Up) is shown at the far left of the Command Line. The current Track mode has no effect on groups.

Command Line / Command Line History: Directly below the Status Bar are the Command Line History and the Command Line. The Command Line displays the command currently being entered. The Command Line History shows the last command executed.

Soft Key Labels: The Soft Key Labels are located directly below the Command Line. The Soft Key Labels describe the function of each soft key. The function commands are executed by pressing one of the soft keys, (S1) - (S10), on the console. The functions of the soft keys change for each display.

The Submaster Display (a blind display)

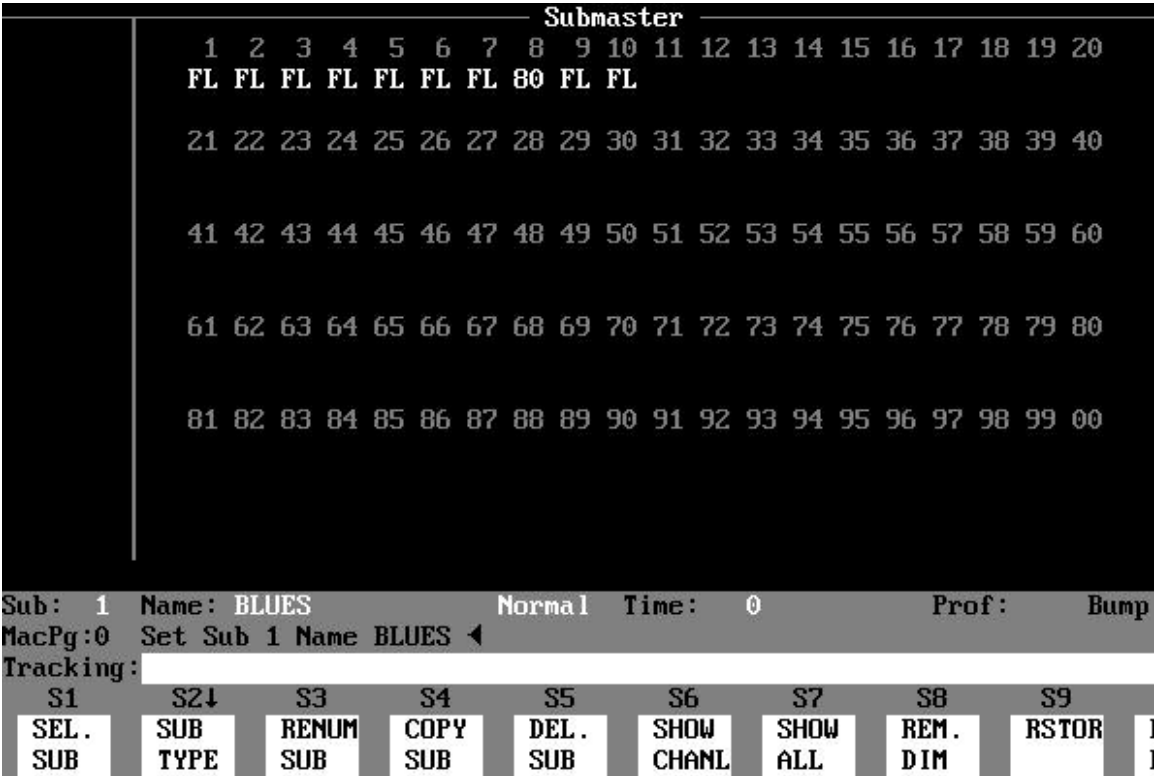


Figure 3.8, Normal Submaster Display

Purpose of the Submaster Display: The Submaster display shows the channel levels assigned to each normal submaster, or shows information defining inhibitive or effect submasters. Use the submaster display to create and edit submasters. Any edits to channel levels or submaster attributes in the Submaster display are recorded as they are entered (the Record Sub command is not necessary to create or edit subs in the Submaster display). There are three different types of submasters:

- Normal submaster
- Inhibitive submaster
- Effect submaster

Contents of the Normal Submaster Display: The upper part of the Normal Submaster display contains the channels and levels of a normal submaster. (See Figure 3.8.) The channel numbers appear above their respective levels. The channel numbers, located above the levels, appear in the following colors:

- cyan = Normal channels
- magenta = Automated channels

The numbers below each channel number is the level of each channel. If no level is listed, the level is zero.

Normal Submaster Status Bar: The Status Bar indicates which submaster is currently being viewed and edited. The Status Bar contains the following information fields:

- ✂✂ **Sub:** shows the number of current submaster.
- ✂✂ **Name:** shows assigned name of current submaster, if any.
- ✂✂ **(Sub Type)** shows "Normal" in gray letters as the current submaster mode. (This information field, located between the Name and Time fields, does not have a visible label.)
- ✂✂ **Time:** shows the time assigned to the submaster Bump button.
- ✂✂ **Prof:** shows the profile assigned to the submaster.
- ✂✂ **Bump:** shows Bump button mode ("ON", "OFF", "SOLO", or "TOG").
- ✂✂ **Mac Pg:** shows number of the macro page (0 - 9) currently being accessed.

Command Line / Command Line History: Directly below the Status Bar are the Command Line History and the Command Line. The Command Line displays the command currently being entered. The Command Line History shows the last command executed.

Soft Key Labels: The Soft Key Labels are located directly below the Command Line. The Soft Key Labels describe the function of each soft key. The function commands are executed by pressing one of the soft keys, (S1) - (S10), on the console. The functions of the soft keys change for each display.

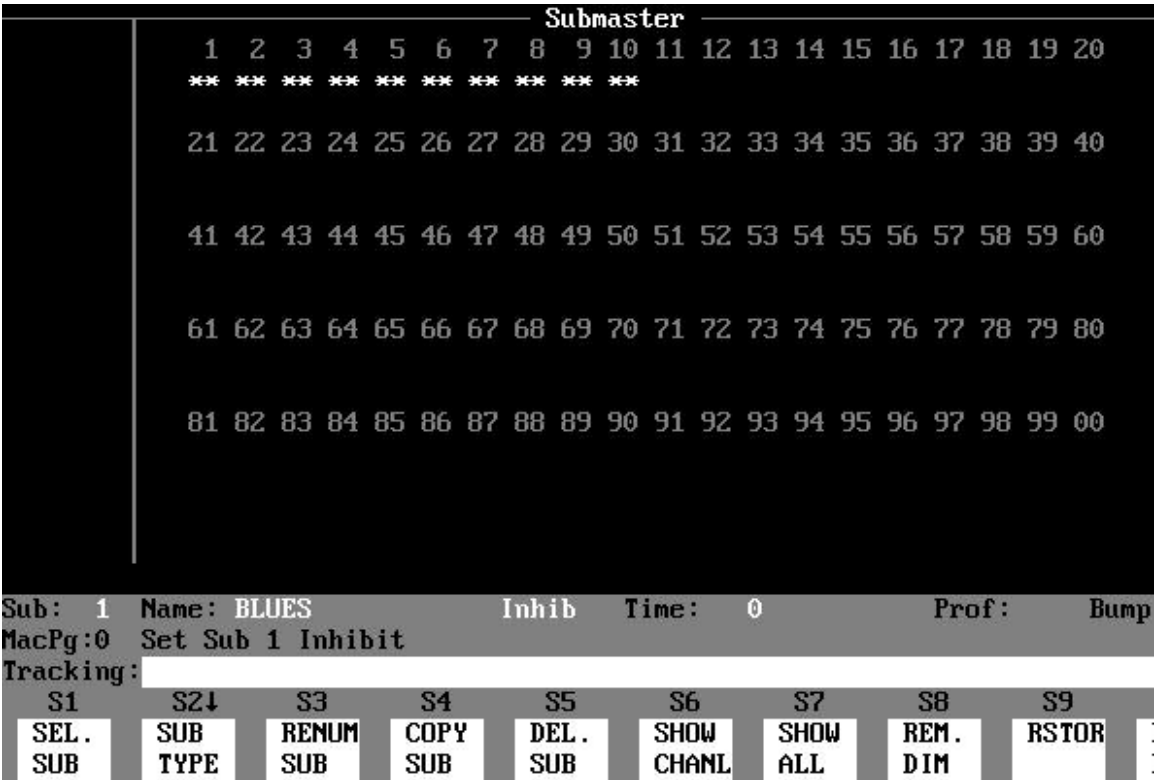


Figure 3.9, Inhibitive Submaster Display

Contents of the Inhibitive Submaster Display: In the upper part the Inhibitive Submaster display, the symbol "*" appears under the inhibited channels, instead of channel levels. (See Figure 3.9.)

Inhibitive Submaster Status Bar: The only difference from the Normal Submaster Status Bar is that the "sub type" field shows "Inhib" in red letters, instead of "Normal".

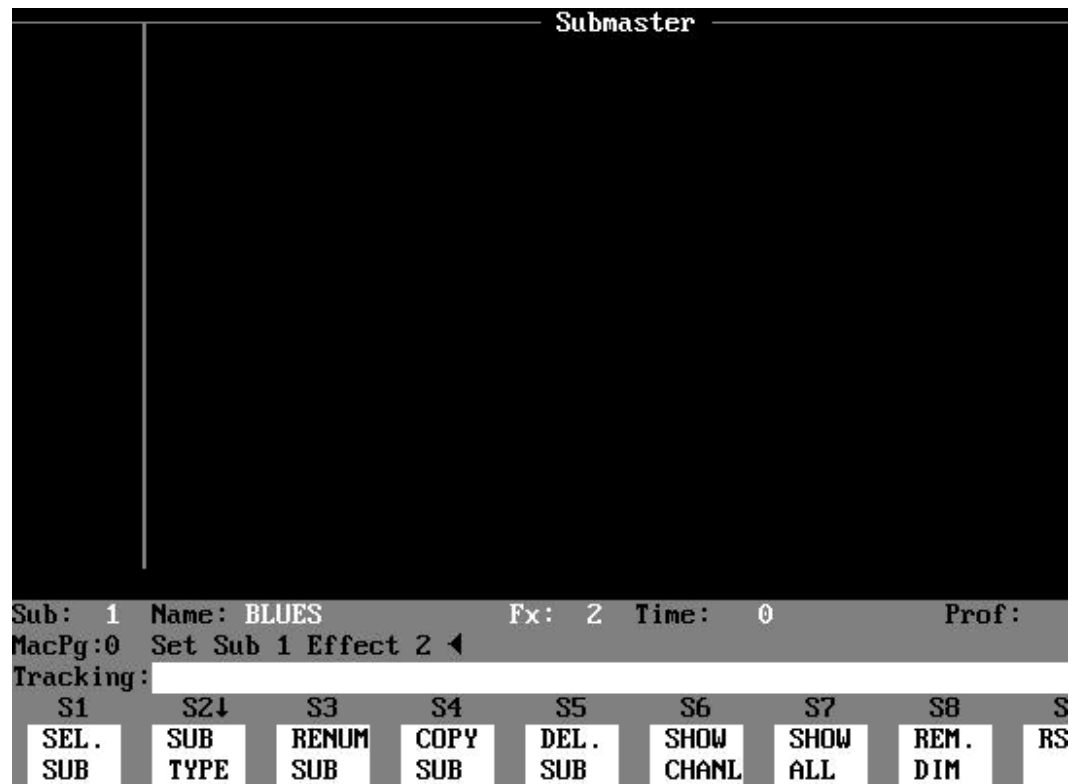


Figure 3.10, Effect Submaster Display

Contents of the Effect Submaster Display: The upper part of the Effect Submaster display is blank - it shows neither channels nor levels. (See Figure 3.10.)

Effect Submaster Status Bar: The only difference from the Normal Submaster Status Bar is that the “sub type” field shows "Fx: #" in yellow letters, indicating the effect number assigned to the submaster.

The Effect Display (a blind display)

Effect				
Step	Channel List	Dwell Time	Active Level	Inac Le
1	12+ 22	1	FL	
2	1 > 5	1	FL	
3	13+ 23	1	FL	
4	6 > 10	0.5	FL	
5	14+ 24	0.5	FL	
6	21 > 25	0.5	90	
7	15+ 25	0.5	90	
Effect: 2 Name: JAZZ Mode: Pile-on Cycle Time: Positive Negative Forward Reverse Alternate Build Bounce Random MacPg:0 Select Step 1 ◀ Tracking:				
S1	S2	S3	S4	S5
S6↓	S7↓	S8	S9↓	
SEL. FX	SEL. STEP	DWELL TIME	ACTIU LEVEL	INACT LEVEL
PATRN	FX UTIL.	TEST FX	STEP UTIL.	

Figure 3.11, Effect Display

Purpose of the Effect Display: The Effect display creates, edits and tests effects. The Effect display shows a list of all channels used in each step of the effect, as well as the timing and level information.

Contents of the Effect Display: The main part of the Effect display consists of five columns of information about the current effect as follows:

- ✂✂ **Step** shows the step numbers (up to 99) of an effect. When an effect is executed, each step executes one after another. After the last step, the sequence repeats again from first to last, for as long as the effect continues to run.
- ✂✂ **Channel List** shows the channels assigned to each step.
- ✂✂ **Dwell Time** shows the length of time each step is active.
- ✂✂ **Active Level** shows the level of the channels when the step is active.
- ✂✂ **Inactive Level** shows the level of the channels when the step is inactive.

? **HINT:** *In the Effect display, use the Position Keypad as follows:*

1. *Use the Up and Down arrow keys to select individual steps in the effect currently being edited. The Down Arrow key will also create steps*
2. *Use the [NEXT] and [LAST] keys to view different effects.*
3. *Use the [PAGE UP] and [PAGE DOWN] keys to view steps that are out of view of the display*

Status Bar: The Status Bar is located just below the main information area. The Status Bar contains the following fields for information:

- Effect: shows the number of the current effect being viewed and edited.
- Name: shows the name of the current effect.
- Mode: shows the effect mode, either "Pile-on", or "Take Control".
- Cycle Time: shows the amount of time it takes to execute all the steps of the effect once (the sum of all the Dwell Times).

Pattern Bar: The Pattern Bar is directly below the Status Bar, and shows the choice of patterns available for the current effect. Selected patterns appear as black text in a gray background. More than one pattern may be selected simultaneously. The choice of effect patterns available in the Pattern Bar is listed below:

- Positive / Negative
- Forward / Reverse
- Alternate
- Build
- Bounce
- Random

Command Line / Command Line History: Directly below the Status Bar are the Command Line History and the Command Line. The Command Line displays the command currently being entered. The Command Line History shows the last command executed.

Soft Key Labels: The Soft Key Labels are located directly below the Command Line. The Soft Key Labels describe the function of each soft key. The function commands are executed by pressing one of the soft keys, (S1) - (S10), on the console. The functions of the soft keys change for each display.

The Cuesheet Display (a blind display)

Cuesheet									
Cue	Time	Delay	Prof	Fx	Fade Fx	Macro	Name		
1	30						HOUSE LIGHTS UP		
2	MANUAL								
> 3	4						BLACKOUT		
	+ 2								
4	3	2							
	+ 4								
5	4		2				CLEAN UP		
	FOLLOW 5								
6	4			1					
7	10					3			
7.5	3				1				
8	MANUAL								
	LINK TO Q 10								
9	MANUAL								
10	3								
Cue: 3 BLACKOUT Time 4+2 Stage Cue: 2 Next Cue: 3									
MacPg:0 Cue 3 Time 4+2									
Tracking:									
S1	S2↓	S3	S4	S5	S6	S7	S8	S9	
TRACK	SEL.	RENUM	COPY	DEL.					
MODE	CUE	CUE	CUE	CUE					

Figure 3.12, Cuesheet Display

Purpose of the Cuesheet Display: The Cuesheet display is used to view the cue order and cue attributes. Cues may be Deleted, Copied, or Renumbered. Cue attributes may also be edited.

Contents of the Cuesheet Display: The main area of the Cuesheet display contains six columns listing cue data and attributes. The information in each column is described below:





- ✂ **Cue** shows the cue numbers and any part numbers.
- ✂ **Time** shows the time assigned to the cue/part.
- ✂ **Delay** shows any delay assigned to the cue/part.
- ✂ **Prof** shows any profile assigned to the cue/part.
- ✂ **Fx** shows any effect number assigned to the cue/part.
- ✂ **Fade Fx** shows any fade effect assigned to the cue/part.
- ✂ **Macro** shows any macro assigned to the cue/part.
- ✂ **Name** shows the name assigned to the cue.
- ✂ **“CLEAN UP”** shows when any cue is a Clean Up cue.
- ✂ **“>”** to the left of the Cue column indicates the current "preview" cue. This is the default cue for any cue attribute edit commands that do not specify a cue number.

✂ **NOTE:** The number and attributes of the current stage cue (last cue to be executed) appear in reverse video in a gray band across the screen.



NOTE: *Information about cue follows, links, link repeats, and link returns appears below the timing information about the cue.*

Status Bar: The Status Bar is located below the main channel and level information area. The Status Bar contains the following fields for information:

-  **Cue:** shows the current cue being viewed and edited.
-  **Stage Cue:** shows the last cue executed on stage.
-  **Next Cue:** shows the next cue number to be executed by pressing the GO button.
-  **Mac Pg:** shows the number of the macro page (0 - 9) currently being accessed.

Command Line / Command Line History: Directly below the Status Bar are the Command Line History and the Command Line. The Command Line displays the command currently being entered. The Command Line History shows the last command executed.

Soft Key Labels: The Soft Key Labels are located directly below the Command Line. The Soft Key Labels describe the function of each soft key. The function commands are executed by pressing one of the soft keys, (S1) - (S10), on the console. The functions of the soft keys change for each display.

Cuesheet Display Paging Rules: The rules for paging through the Cuesheet display are as follows:

1. Up and Down Arrow keys ([**↑**] and [**↓**]) scroll through the cue list one cue at a time.
2. [**PAGE UP**] and [**PAGE DOWN**] scroll through the cue list one full page at a time.
3. [**NEXT**] and [**LAST**] select the current preview cue (indicated by the ">" symbol).
- or -
Press [**CUE**] [**#**] [**ENTER**]
4. If you change displays and then return to the Cuesheet display, the display will be centered on the
current Preview cue (indicated by the ">" symbol).

The Tracksheet Display (a blind display)

Tracksheet																						
Channel	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22
1		30		30		30																
2		30	55	55		30				55	55	55	55	55	55							
> 3		00	00	00		00				00	00	00	00	00	00							
4		30		30		30																
5		30		30		30																
6		30		30		30																
7		30		30		30																
7.5		30		30		30																
8		30		30		30																
9		30		30		30																
10		30		30		30																
Cue: 3 BLACKOUT Time 4+2 Stage Cue: 2 Next Cue: 3																						
MacPg:0 Channels 2+4+6 @ 0 ◀																						
Tracking:																						
	S1	S2	S3	S4	S5	S6	S7	S8	S9													
	TRACK	SEL.	RENUM	COPY	DEL.	SHOW	SHOW	REM.	RSTOR													
	MODE	CUE	CUE	CUE	CUE	CHANL	ALL	DIM														

Figure 3.13, Tracksheet Display





Purpose of the Tracksheet Display: The Tracksheet display is really a giant spreadsheet that shows all channel levels of all cues, side by side, so that channel levels of cues may be compared. In the Tracksheet display, all edits are recorded as you make them. Cues may be created or edited in this display. Cue attributes may also be added or edited in the Tracksheet display, although they are not shown.

Contents of the Tracksheet Display: The top row of the display lists the channels currently selected for viewing. The cue and any part number appear in the far left column of this display, with the channel levels in the cue shown in the same row. When a cue is currently selected for editing, the ">" symbol appears next to its cue number.

Below each channel number is a column of levels, representing the level of that channel in each cue (if no level is visible, then the level is zero). Non-tracking (hard) levels are shown in white. Tracking (soft) levels are shown in gray. If the track mode is Clean Up, then all hard zeros disappear, and all levels appear white. If the track mode is Cue Only or Tracking then the channels levels are shown in the following two colors:

⚪	white	= Hard (non tracking) levels
⚫	gray	= Soft (tracking) levels

Status Bar: The Status bar is located just below the channel and level information in the main part of the display. The Status Bar contains the following fields of information:

-  **Cue:** shows the current preview cue being edited, and the cue attributes.
-  **Stage Cue:** shows the last cue executed on stage.
-  **Next Cue:** shows the next cue number to be executed when the GO button is pressed.
-  **Mac Pg:** shows the number of the macro page (0 - 9) currently being accessed.


Command Line / Command Line History: Directly below the Status Bar are the Command Line History and the Command Line. The Command Line shows the command currently being entered. The Command Line History shows the last command executed.

Track Mode: The current Track mode (Cue Only, Tracking, or Clean Up) appears at the far left of the Command Line.

Soft Key Labels: The Soft Key Labels are located directly below the Command Line. The Soft Key Labels describe the function of each soft key. The function commands are executed by pressing one of the soft keys, (S1) - (S10), on the console. The functions of the soft keys change for each display.

Tracksheet Display Paging Rules: The rules for paging through the Tracksheet display are as follows:

1. To scroll the list of cues up or down one line at a time, press the Up and Down Arrow keys.
2. To scroll the list of cues up or down one page at a time, press the [PAGE UP] and [PAGE DOWN] keys.
3. To select a different cue for editing, press the [NEXT] and [LAST] keys.
- or -
Press [CUE] [#] [ENTER].
4. To show a different range of channels across the top of the display, press the Left and Right Arrow keys.

 **NOTE:** When you press [CUE] [#] [ENTER], a new cue is created if the cue does not already exist.

? **HINT:** *If you enter a channel number in the currently selected edit cue, the display will automatically page to the channel location in the Tracksheet display.*

? **HINT:** The (CUE ROWS) soft key also exists as a "hidden" soft key in the Playback display, under (S1).

? **HINT:** Selecting the number of cues rows shown in the Cuesheet Area may work best when you are using the compressed text display mode (43 lines per page).

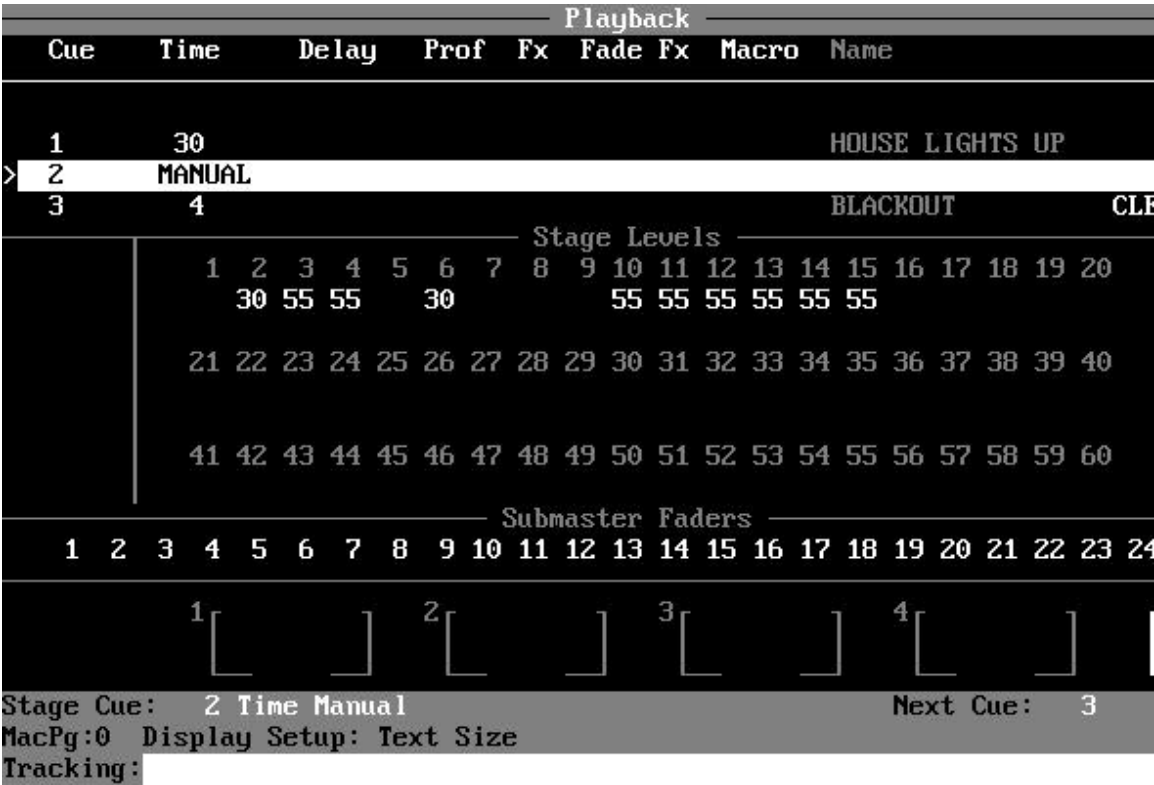


Figure 3.15, Stage Levels in Playback Display

Stage Levels Window: The Playback display also allows you to view live stage levels. The number of rows of cuesheet information shown in the Cuesheet Area can be specified in the Setup display by pressing the (DISP SETUP) and (CUE ROWS) soft keys. If fewer rows are specified than are available in the display, the extra rows are used to show live stage channel levels. This feature is especially effective when you are using the compressed (43-line) text display mode, when you can have many more rows on the screen than in the uncompressed (27-line) text display mode.





Submaster Fader Window: The Submaster Fader numbers are listed sequentially in rows, below the cuesheet area. Below the Submaster Fader

numbers are their current level readings. If no level is present, the submaster fader is all the way down at zero.




The Submaster Fader Window has its own Compressed and Uncompressed modes. In Uncompressed mode, the submaster levels appear below their respective submaster fader numbers, as described above. (See Figure 3.14). In Uncompressed mode, only the sequential submaster numbers are shown. If a submaster is active, it is shown in reverse video. (See Figure 3.15). To toggle between Compressed and Uncompressed mode in the Setup display, press the Submaster Window (SUB WINDOW) soft key under the Display Setup (DISP. SETUP) soft key.

? **HINT:** *The (SUB WINDOW) soft key also exists as a "hidden" soft key in the Playback display, under (S10).*


The Submaster Fader **numbers** are shown in different colors according to the following code:

 white	= Normal (pile-on) submaster
 yellow	= Effect loaded on submaster
 red	= Inhibitive submaster
 gray	= Unassigned "empty" submaster

When the Submaster Fader Window is uncompressed, the submaster **levels** are shown in different colors to show where the submaster levels originate according to the following code:

 gray	= Manual level controlled by submaster fader position.
 red	= Level faded up (or fading up) by the Bump button.
 blue	= Level faded down (or fading down) by the Bump button.

When the Submaster Window is compressed, submaster levels above zero are indicated by a reverse video box around the submaster number.

 **NOTE:** *In compressed mode, **Inhibitive** subs are shown in reverse video anytime their levels are less than **Full** (when they are actively "inhibiting" channels).*

Playback Fader Boxes: The four Playback Fader Boxes, numbered 1 - 4, are located below the Submaster Fader Window on the Playback display screen. The Playback Fader Boxes indicate the current status of any cues actively fading. When a cue is executed by pressing the GO button or the [GO

TO CUE] key, the cue is automatically loaded onto the lowest available playback fader. The Playback Fader Boxes work exactly the same as in the Stage display. (See the Stage display section, earlier in this chapter.)

Grandmaster Fader Box: To the right of the Playback Fader Boxes is the Grandmaster Fader Box. It indicates the level of the Grandmaster, anywhere from 100% (FL=Full Level) to 0% (B.O.=Black Out). The Blackout switch will also cause this indicator to read "B.O.". The Grandmaster level blinks anytime it is set below Full.

Status Bar: The Status Bar is located just below the channel and level information in the main part of the display. The Status Bar contains the following fields of information:

- ✂✂ **Stage Cue:** shows the last cue executed on stage.
- ✂✂ **Next Cue:** shows the next cue number to be executed by pressing the GO button.
- ✂✂ **Mac Pg:** shows the number of the macro page (0 - 9) currently being accessed.
- ✂✂ **Dimmers Parked** message only shows when there are dimmers currently parked.

Track Mode: The current Track mode (Cue Only, Tracking, or Clean Up) appears at the far left of the Command Line.




Command Line / Command Line History: Directly below the Status Bar are the Command Line History and the Command Line. The Command Line displays the command currently being entered. The Command Line History shows the last command executed.

Playback Display Paging Rules: The rules for paging through the Playback display are as follows:

1. To scroll the list of **stage channels** up or down **one line** at a time, press the Up and Down Arrow keys.
2. To scroll the list of **stage channels** up or down **one page** at a time, press the [PAGE UP] and [PAGE DOWN] keys.
3. To select a different preview cue for editing, press [CUE] [#] [ENTER]. (The cue may or may not be visible from the Playback display.)
4. The cuesheet area of the Playback display always stays centered on the current stage cue.

Soft Keys: Although no soft keys are shown in the Playback display, there are four "hidden" soft keys that function in this display. These hidden soft keys are the same soft keys that appear under the (DISP. SETUP) soft key in the Setup display, as shown below:

- ✂✂ **S1: (CUE ROWS)** = Defines how many rows of information are shown in the Playback display.

-  **S2:** (TEXT SIZE) = Toggles between 25 and 43-line display modes.
-  **S3:** (COPY RIGHT) = Shows the copyright notice.
-  **S4:** (SUB WINDOW) = Toggles submaster window between Expanded and compressed modes.

The Patch Display (a blind display)

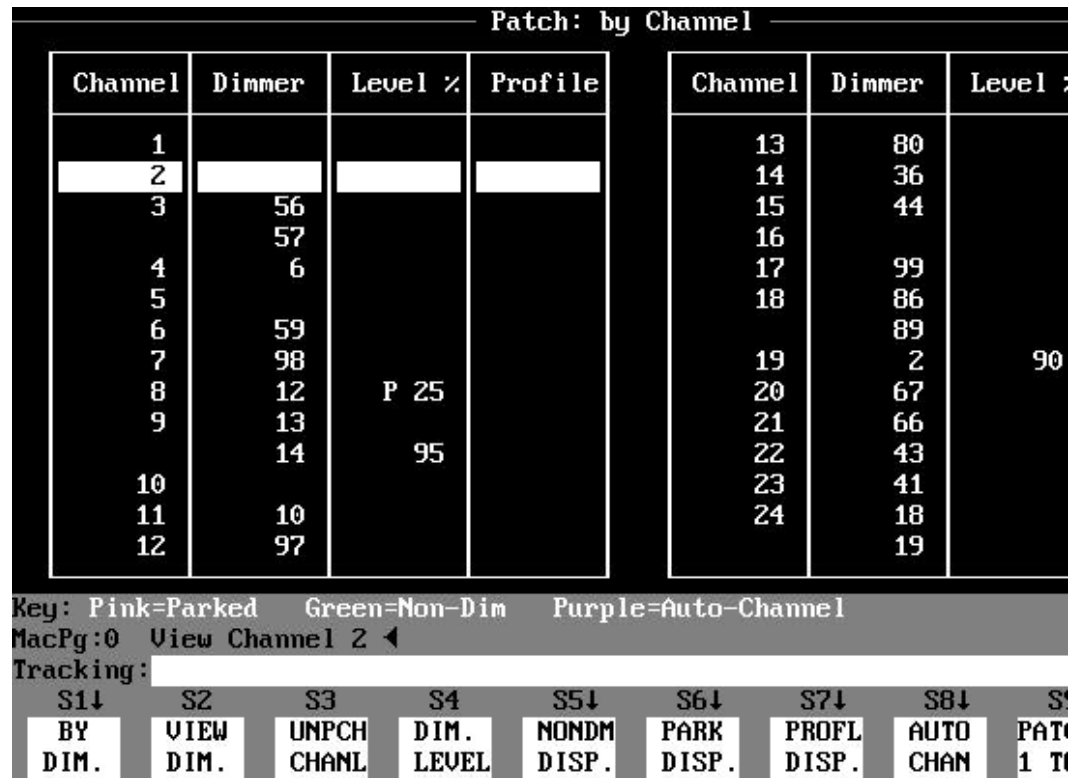


Figure 3.16, Patch: By Channel Display

Purpose of the Patch display: The Patch display shows and allows editing of channel-to-dimmer assignments. One channel can control any number of dimmers. The Patch display has four different display modes:

✂ Patch: By Channel display shows the patch table in channel order. (See Figure 3.16.)

You can edit channel-to-dimmer assignments in this mode.

✂ Patch: By Dimmer display shows the patch table in dimmer order. (See Figure 3.17.)

You can edit channel-to-dimmer assignments in this mode.

✂ Patch: Non-Dim Dimmers subdisplay shows all virtual non-dim dimmers. (See Figure 19.1.)

You can assign dimmers as virtual non-dims in this mode.

✂ Patch: Parked Dimmers subdisplay shows all parked dimmers. (See Figure 19.2.)

You can park and unpark dimmers in this mode.

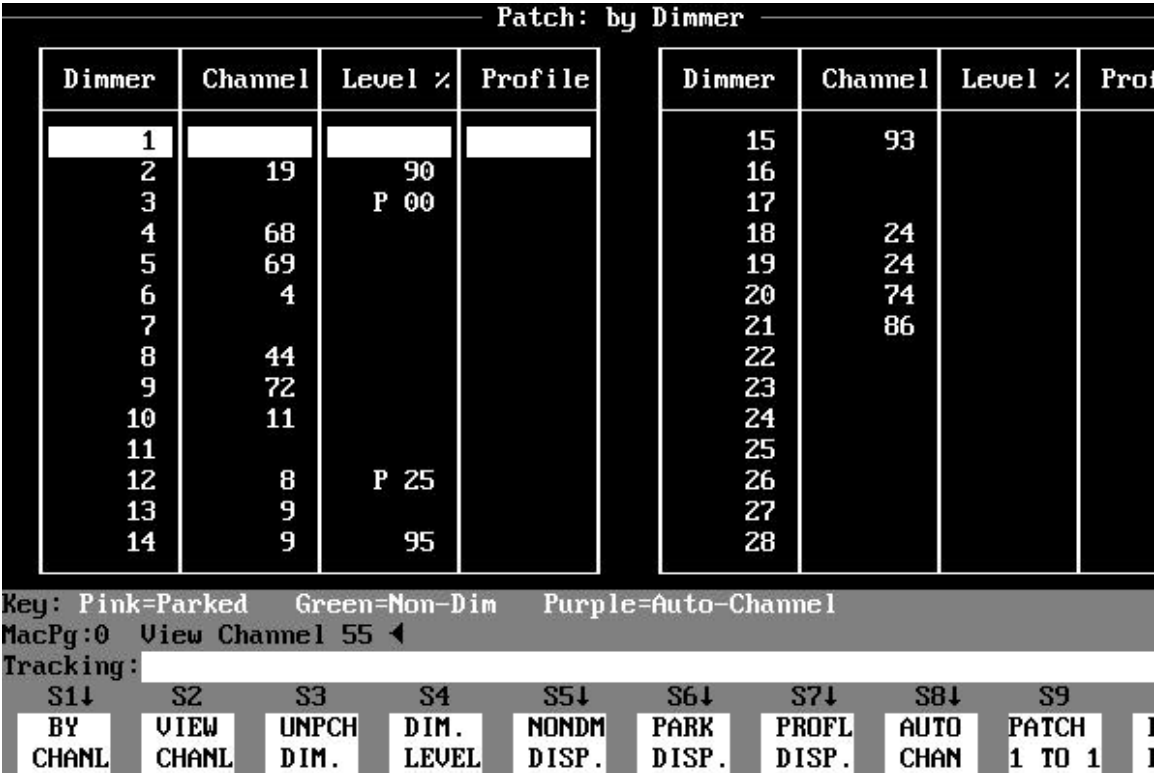





Figure 3.17, Patch: By Dimmer Display


Press the (S1) key to toggle between the Patch: By Channel and Patch: By Dimmer displays. Press the (NONDM DISP.) soft key to see the Patch: Non-Dim Dimmers subdisplay. Press the (PARK DISP.) soft key to see the Patch: Parked Dimmers subdisplay.

 **NOTE:** (S1) is the (BY DIM.) soft key in the Patch: By Channel display. (S1) is the (BY CHANL) soft key in the Patch: By Dimmer display.

Contents of the Patch Display: The main upper portion of the Patch display consists of two tables of four columns each (each table is a sequential continuation of the information). The four columns of data in Patch: By Channel mode are listed sequentially by channel as follows (in Patch: By Dimmer mode, the first and second columns are swapped):




 Column 1, **Channel**, lists the channels in sequential order.


 Column 2, **Dimmer**, lists the dimmers assigned to each channel.


 Column 3, **Level %**, shows the current proportional level, or parked level of the dimmer.

 Column 4, **Profile**, shows the Profile number assigned to the dimmer (if any).

Below the two tables is a key indicating the colors used in this display as follows:

 pink	= Parked dimmer
 green	= Virtual Non-Dim dimmer
 purple	= Automated channel

 **NOTE:** When a dimmer is parked, a "P" appears to the left of the parked level in the Level % column, and the level is shown in pink.

 **ADVANCED TOPICS:** For more information on Parked dimmers, Virtual Non-Dim dimmers, and Automated channels, see Chapter 20, *Advanced Patching Options*.

Command Line / Command Line History: Directly below the Status Bar are the Command Line History and the Command Line. The Command Line displays the command currently being entered. The Command Line History shows last the command executed.

Track Mode: The current Track mode (Cue Only, Tracking, or Clean Up) is shown at the far left of the Command Line.

Soft Key Labels: The Soft Key Labels are located directly below the Command Line. The Soft Key Labels describe the function of each soft key. The function commands are executed by pressing one of the soft keys, (S1) - (S10), on the console. The functions of the soft keys change for each display.

The Setup Display (a blind configuration display)

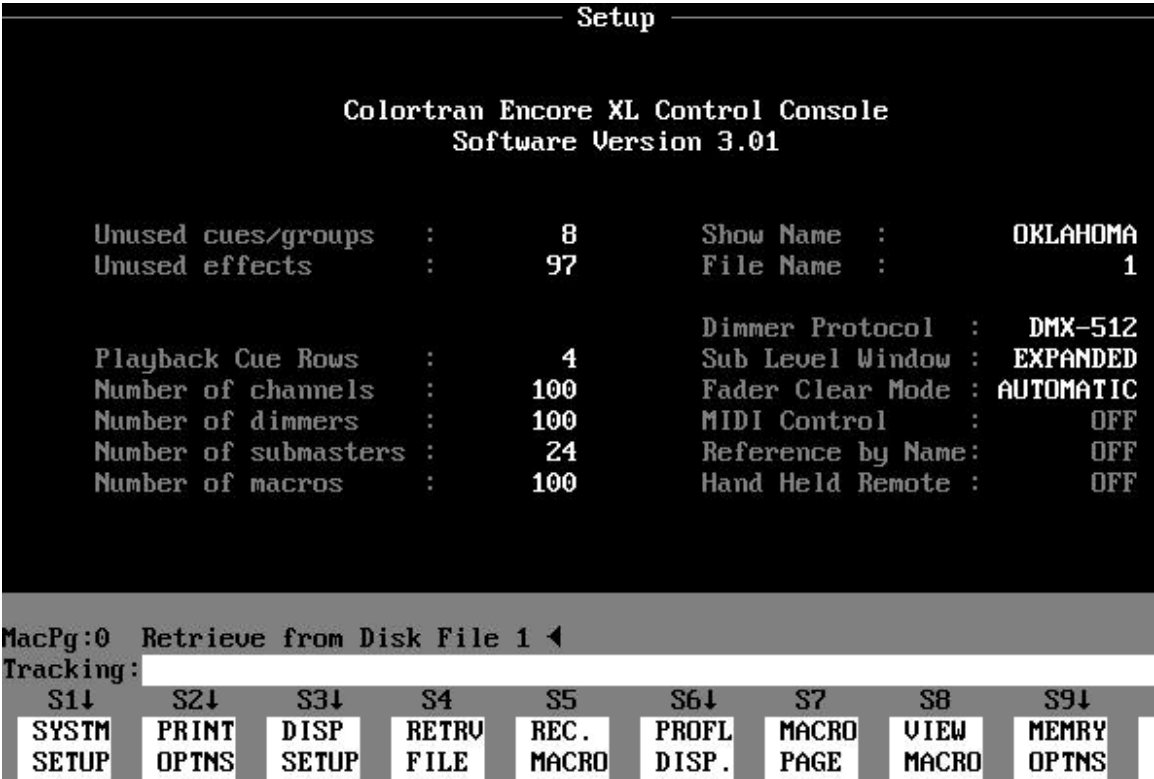


Figure 3.18, Setup Display

Purpose of the Setup Display: The Setup display is used to customize show parameters to suit your specific needs. All editable parameters shown in the Setup display are edited through the soft keys available in this display. The Setup display shows all the current setup parameters for a show. These parameters include:

- ✂✂ **Show Name** (this is different from the File Name)
- ✂✂ **Number of dimmers** (total) for the show
- ✂✂ **Number of channels** (total) for the show
- ✂✂ **Dimmer Protocol** that is currently selected

Printing and memory functions are also performed in the Setup display.





Contents of the Setup Display: Your Encore model and software version number are shown at the top of the Setup display. Below this are the Show Name and File Name of the currently loaded show. The information fields in the Setup display are summarized in Table 3.1 on the next page.

Unused cues / groups	Number of cues, cue parts and groups available to record in show.
Unused effects	Number of effects available to record in show.


Playback Cue Rows	Number of rows of cue information shown in the Playback display.
Number of channels	Total channels configured in your show.
Number of dimmers	Total dimmers configured in your show.
Number of submasters	Total submasters in your Encore model.
Number of macros	Total macros in your Encore model.
Show Name	The name of the show currently loaded in the console.
File Name	The file name of the show currently loaded in the console. (This is the file name used on the floppy disk.)
Dimmer Protocol	Protocol selected (DMX-512 or CMX).
Sub Level Window	EXPANDED or COMPRESSED sub window in Playback display.
Fader Clear Mode	AUTOMATIC or MANUAL
MIDI Control	Device # or OFF
Reference by Name	ON or OFF
Hand Held Remote	ON or OFF

Table 3.1, Setup Display Information Fields

Display Formatting Options: Display formatting options are changes to the display appearance that you can configure. The display formatting options are:

-  **Number of cue rows shown** (See Playback Display topic in this chapter.)
-  **Text size** (See Text Size topic, below.)
-  **Submaster Fader Window size** (See Playback Display topic in this chapter.)
-  **Channel formatting** (See Basic Display topic, at the beginning of this chapter.)

Text Size: Pressing the (TEXT SIZE) soft key toggles between the two different display modes: 27 lines per page, and 43 lines per page. The (TEXT SIZE) soft key is available under the Display Setup (DISP. SETUP) soft key.

 **HINT:** *The Compressed text size mode is useful when you need a lot of information on the screen.*

Submaster Fader Window: The Submaster Fader Window in the Playback display can be toggled between Expanded mode and Compressed mode by pressing the Submaster Window (SUB WINDOW) soft key, available under the Display Setup (DISP. SETUP) soft key. The Expanded mode shows

the submasters and their current levels. The Compressed mode shows only the submaster numbers without their levels. When the Submaster Fader Window is in Compressed mode, an active submaster is shown in reverse video.

Profile Editor Subdisplay: A profile is a method of customizing an output curve assignment, which may be assigned any number of times to different cues or dimmers. The Profile Editor subdisplay is available under the Profile Display (PROF. DISP.) soft key.



ADVANCED TOPICS: See Chapter 18, *Profiles*.

Track Mode: The current Track mode (Cue Only, Tracking, or Clean Up) appears at the far left the Command Line. The Track mode applies when you use the memory functions available in the Setup display.

Command Line / Command Line History: Directly below the Status Bar are the Command Line History and the Command Line . The Command Line displays the command currently being entered. The Command Line History shows the last command executed.

Soft Key Labels: The Soft Key Labels are located directly below the Command Line. The Soft Key Labels describe the function of each soft key. The function commands are executed by pressing one of the soft keys, (S1) - (S10), on the console. The functions of the soft keys change for each display.

CHAPTER 4:

Console System Setup

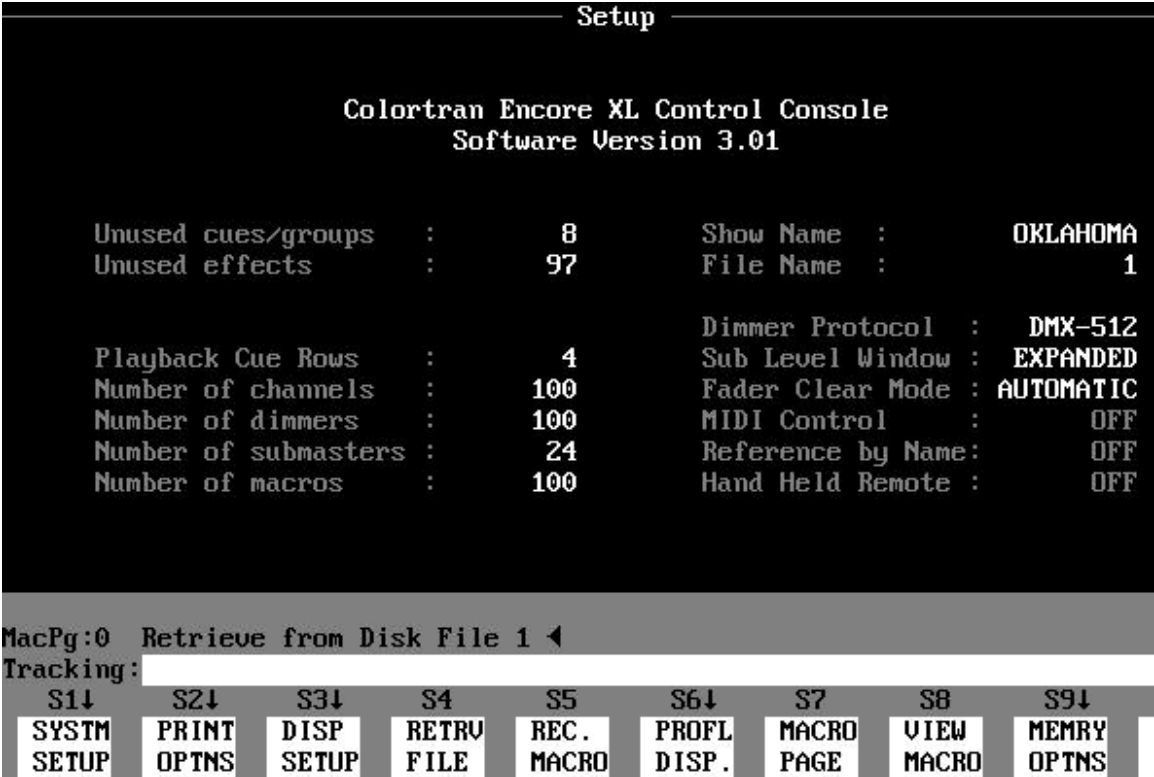


Figure 4.1 Setup Display

Using the Setup Display

The Setup display gives you a way to configure the console to match your overall system. In the Setup display you can also change fundamental control settings, and execute printing and file management tasks. In the Setup display, you can perform the tasks listed below:

- ✍✍ Modify system settings
(Discussed in this chapter.)
- ✍✍ Modify display parameters
(See Playback and Setup Display topics in Chapter 3, *Displays*.)
- ✍✍ Change displays on the optional auxiliary monitor
(See Appendix G, *Auxiliary Monitor*.)

- ✍✍ Execute printing commands
(See Chapter 12, *Utilities, Warnings, Printing, and Default Settings.*)
- ✍✍ View console active memory space
(See Chapter 13, *Memory.*)
- ✍✍ Save, view, copy, delete, and retrieve show files from floppy disks
(See Chapter 13, *Memory.*)
- ✍✍ Record macros, select the current Macro Page, and view macro contents
(See Chapter 21, *Macros.*)


In this chapter we discuss the options available to you under the (SYSTEM SETUP) soft key. See the appropriate chapter for information about the other topics listed.

S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
NAME SHOW	# OF DIMRS	# OF CHANS	DIM. PROTO	HAND- HELD	MIDI CNTRL	MIDI DEV#	REF BY NAME	FADER CLEAR	

Figure 4.2 System Setup Soft Keys

System Setup

In the System Setup, you can use the soft keys shown in Figure 4.2 to define the number of dimmers and channels used in a show, as well as enable or disable peripheral devices such as the Hand Held Remote or the MIDI interface. System Setup assignments remain in memory even after the console is turned off and then turned back on again. When console memory is cleared, the System Setup assignments are reset to the factory defaults. The dimmer protocol selection however, always retains its assignment when the console memory is cleared.

 **ADVANCED TOPIC:** For more information about how System Setup assignments are held in memory, see the System Settings In Memory topic in Chapter 13, *Memory*.

Show Name

The (NAME SHOW) soft key provides a way to add an additional alpha-numeric label to a show file. The Show Name is different than the show File Name. The Show Name only appears in the Setup display, and can only be viewed when the show is in active memory.



EXAMPLE: To assign a Show Name to a show in the Setup display:

1. (SYSTM SETUP)
2. (NAME SHOW) [enter alpha-numeric show name] [ENTER]



ADVANCED TOPICS: To name your show files using alphabet characters, see Chapter 11, *Names*.

Console Model	Channel Capacity	Dimmer Capacity
24/48	24 in 2-Scene mode 144 in Multi-Scene mode	512
24/48 Expanded	24 in 2-Scene mode 512 in Multi-Scene mode	512
48/96	48 in 2-Scene mode 144 in Multi-Scene mode	512
48/96 Expanded	48 in 2-Scene mode 512 in Multi-Scene mode	512
XL	512	512
XL/2	1024	1024

Table 4.1, Console Channel / Dimmer Capacities

Number of Channels and Dimmers

The maximum number of control channels and dimmer channels available is determined by the model of Encore console you are using. (See Table 4.1.) You may select a lesser number of channels and dimmers by using the (# OF CHANS) soft key or the (# OF DIMRS) soft key under the (SYSTM SETUP) soft key. These commands address the console globally, reducing the number of channels shown in **all** displays.



NOTE: *The number of channels and dimmers may be customized without clearing memory. If you reduce the number of channels or dimmers, and restore them later, the previous patch assignments will be remembered. If you increase the number of channels or dimmers in a show that was read **from disk**, any previously assigned Non-Dim or Parked dimmers will be remembered, but patch assignments will not be remembered. See Chapter 5, *Setting Up The Soft Patch*.*



EXAMPLE: To set up a show with 200 channels:

1. (SYSTM SETUP)
2. (# OF CHANS) [200] [ENTER]



EXAMPLE: To set up a show with 300 dimmers:

1. (SYSTM SETUP)

2. (# OF DIMRS) [300] [ENTER]



NOTE: *If you need to use a dimmer protocol other than DMX512 or CMX, (such as AMX or analog control) there are a number of commercially available protocol converters. These can be rented or purchased from theatrical equipment suppliers or from Colortran. For more information, call Colortran Customer Service at (800) 959-6004.*

Selecting Dimmer Protocol

You can select between two different dimmer protocols for the output of the console: DMX512 (the USITT standard) and CMX (a.k.a. Colortran protocol). Under the (SYSTM SETUP) soft key, every press of the (DIM. PROTO) soft key switches between these two protocols. You do not need to use the [ENTER] key; the change is instantaneous when you press the (DIM. PROTO) soft key.

The console remembers the dimmer protocol setting when you turn the console off, and even when you do a “hard clear” by holding the [CLEAR] key down while the console boots. The dimmer protocol is not recorded to disk as part of the Show File, and when you retrieve a show from disk, the protocol selection does not change. There are two conditions that may cause the console to reset the dimmer protocol selection:



When you update the console to new software



When the RAM battery is dead

If the RAM battery is dead, the console will not hold the current show in its memory when you turn the console off.



ADVANCED TOPICS: See Chapter 13, *Memory*. For more information about changing the RAM battery, see Appendix A, *Maintenance and Customer Service*.

Hand Held Remote

The Hand Held Remote is toggled on and off with the (HAND-HELD) soft key. When the console is turned off and then back on, the Hand Held Remote retains its On/Off setting. The Hand Held Remote On/Off setting is not stored as part of the show file when you record a show to disk. When you load in a show from disk, the On/Off setting does not change.

If the Hand Held Remote is enabled while it is not connected to the console, a message appears on the console display to indicate that the Hand Held Remote is not connected. The message can be cleared with the [CLEAR] key. The Setup display shows that the Hand Held Remote is enabled (On). The console can then be addressed by the Hand Held Remote when it is later connected to the console.



ADVANCED TOPICS: For more information on the Hand Held Remote, see Appendix C, *Hand Held Remote*.

MIDI Interface

Software Version 2.04 and later support both MIDI Show Control commands and general MIDI data messaging. Commands can be accepted and transmitted to execute playback commands.

If your console was originally shipped with software Version 1.04 or lower, a hardware modification is required to allow the MIDI functions to operate correctly. (You will see a message on your monitor that indicates this if your console is one of these initial units.) Even if your console requires the hardware modification, you may still enable the MIDI functions on your console under the (SYSTM SETUP) soft key, and see how the console shows incoming and outgoing MIDI commands in the Playback display. If you require the MIDI hardware change for your console, please contact Colortran Field Service at (800) 959-6004.



ADVANCED TOPICS: For more information about MIDI functions, see Appendix D, *MIDI Interface*.

Reference By Name

You can use the (REF BY NAME) soft key in the System Setup to allow reference to cues, groups, subs, and effects by their names as well as their numbers. Press the (REF BY NAME) soft key to enable/disable the feature. By disabling the Reference By Name feature, you can prevent your Bump buttons from going into alpha mode when other keys are pressed ([SUB], [GROUP], etc.).



ADVANCED TOPIC: See Chapter 11, *Names*.

Playback Fader Clearing Modes

You can use the (FADER CLEAR) soft key in the System Setup to toggle the Playback Fader Clearing mode between Automatic and Manual. If the Fader Clearing mode is Automatic, the cues unload from the playback faders as they finish. If the Fader Clearing mode is Manual, all fades do not clear from the faders when they finish. Rather, the fades remain on the faders until the playback fader Take Control button is pressed. Timed cues fade in their prescribed time, but will become manual when they are complete, allowing you to move the fader to the top of its travel to "grab" the fade and reverse its direction manually. In either Fader Clearing mode, cues may be loaded to faders with the GO button or the [LOAD] key.



HINT: *In normal theatrical applications, the Automatic Fader Clearing mode is usually used.*



EXAMPLE: To toggle the Fader Clearing mode in the Setup display:

1. (SYSTM SETUP)
2. (FADER CLEAR) (Pressing [ENTER] is not necessary.)



ADVANCED TOPIC: See the topic on Clearing Fades From The Playback Faders in Chapter 9, *Playing Back Cues*.

CHAPTER 5:

Setting Up the Soft Patch

What is a Soft Patch?

The term "patch" refers to a table that shows which dimmer numbers are controlled by which control channels. The dimmers in turn feed electrical current into the circuits that connect to lighting instruments. In some older lighting systems, the assignments of instruments to dimmers are altered through a "hard" patch. A hard patch is a hard-wire method such as the "telephone patch" or a "slider patch" used to connect a circuit to a dimmer. Older lighting consoles have each dimmer controlled by its own slider. Newer control consoles such as the Encore series, allow you to control a number of dimmers with one control channel (a "soft" patch). If a theater uses a hard patch from the circuits to the dimmers, and a console with a soft patch, there may be an association of up to three numbers for each lighting instrument: a circuit number, a dimmer number, and a control channel number.

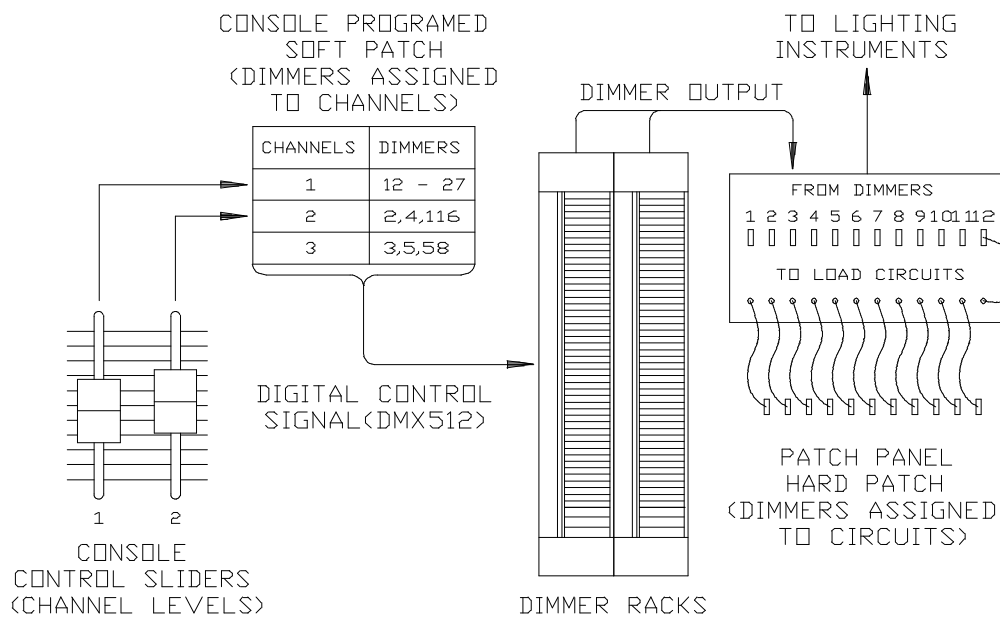


Figure 5.1, Lighting Control System Functional Diagram

The Patch display is a way to "patch" a control channel to a dimmer channel. The dimmer number may be connected to an actual dimmer, or the connection

may be to an automated device such as a color scroller or a moving fixture. A control channel may be patched to a single dimmer or multiple dimmers.

When a dimmer is currently patched to a channel and then re-patched to a new channel, the dimmer is "robbed" from the previous assignment. The previous channel assignment is deleted without warning and the dimmer is given to the new channel assignment.

? **BASIC RULE:** *Remember that a dimmer can be controlled by only one channel, but a channel can control any number of dimmers.*

Patch Displays

The Patch display consists of two windows of four columns each: Channel, Dimmer, Level, and Profile. Level refers to a proportional level assigned to an individual dimmer. Profile refers to a dimmer output curve assigned to an individual dimmer. The Patch display has two different display modes for the patch information: the Patch: By Channel display, and the Patch: By Dimmer display.

Press the (BY CHANL) soft key to access the Patch: By Channel display. Press the (BY DIM) soft key to access the Patch: By Dimmer display.

? **HINT:** *The same soft key, SI, toggles between the Patch: By Channel and the Patch: By Dimmer displays.*

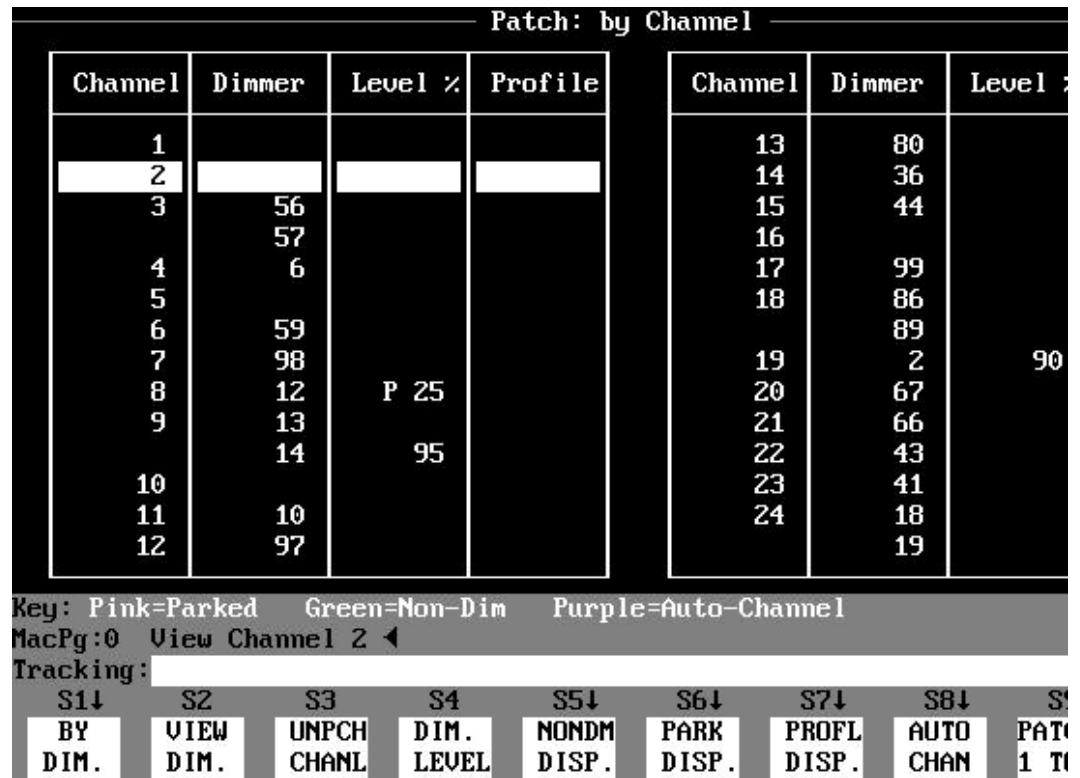


Figure 5.2, Patch: By Channel Display

Patch: By Channel Display Mode

The Patch: By Channel display lists the patches by channel order in the first column, and the dimmer assignments in the second column. If more than one dimmer is patched to a channel, the channel number is not repeated in the channel column, but the channel column will always show a channel number at the top (when the dimmer assignments to a channel continue from the previous page).

If no dimmers are patched to a given channel, there is a blank in the dimmer column next to the channel number. A patched channel is shown in white on the display, and an unpatched channel is shown in gray.

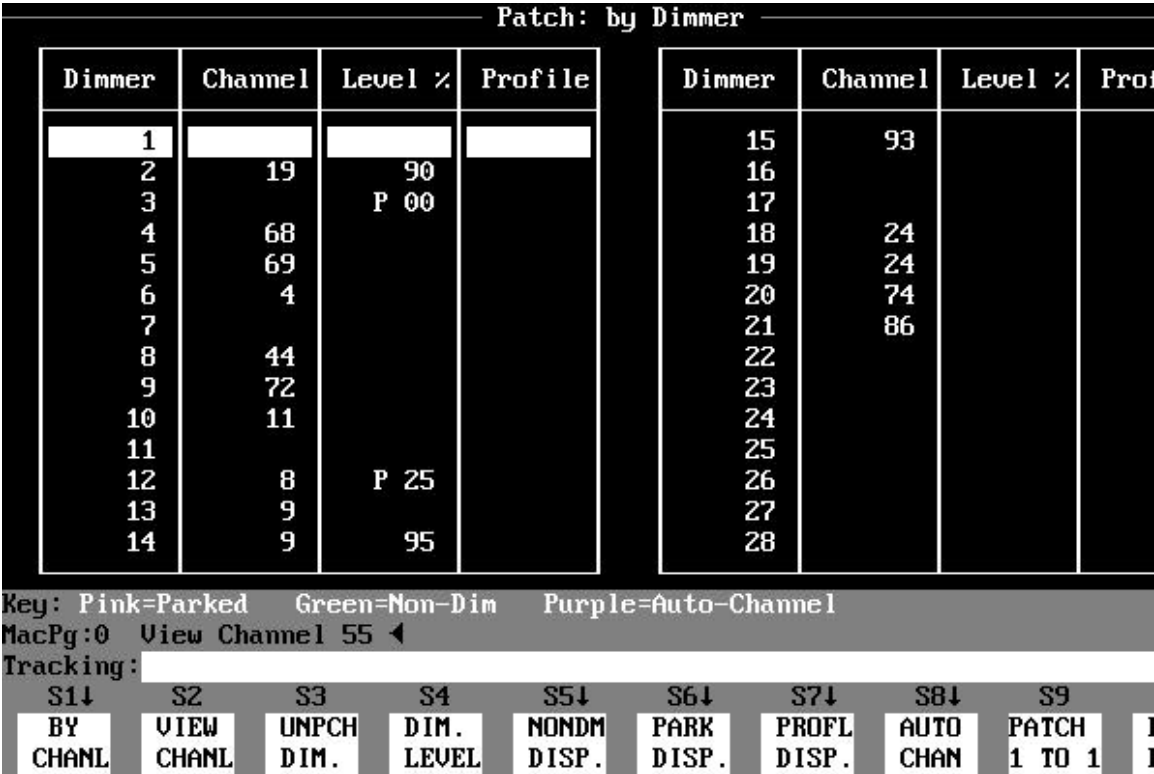



Figure 5.3, Patch: By Dimmer Display

Patch: By Dimmer Display Mode

The Patch: By Dimmer display lists the patches in dimmer order in the first column, and the channel assignments in the second column. If a given dimmer is not patched to a channel, there is a blank in the channel column next to the dimmer number. The dimmers are always shown in gray on the display, unless they are assigned as Non-Dim dimmers.

 **ADVANCED TOPIC:** See the Non-Dim Dimmers topic in Chapter 20, *Advanced Patching Options*.

Other Patch Display Modes

There are two other Patch display modes: the Patch: Parked Dimmers subdisplay, and the Patch: Non-Dim Dimmers subdisplay. Press the (PARK DISP.) soft key to access the Patch: Parked Dimmers subdisplay. Press the (NONDM DISP.) soft key to access the Patch: Non-Dim Dimmers subdisplay.



ADVANCED TOPIC: For more information on the Patch: Parked Dimmers subdisplay or the Patch: Non-Dim Dimmers subdisplay, see Chapter 20, *Advanced Patching Options*.

Patching Channels to Dimmers

In the Patch: By Channel display, you begin a patch command by pressing the number of the channel that you want to assign, followed by the [@] key. At this point, you can enter dimmer number assignment(s). The console automatically inserts the word "Dimmer" into the Command Line when you enter the first number after the [@] key. To assign more than one dimmer, enter a dimmer list, which can contain a range of dimmers joined with the [+], [-], and [>] keys. Execute the command by pressing the [ENTER] key.



EXAMPLE: To patch channel 2 to dimmer 51 in the Patch display:
[2] [@] [51] [ENTER]

If you want to construct patching commands using the dimmer number(s) first, use the [DIMMER] key to start the patching command.



EXAMPLE: To patch dimmers 7 and 24 to channel 2 in the Patch display:
[DIMMER] [7] [+] [24] [@] [2] [ENTER]



BASIC RULE: *In all patching commands, it is not necessary to specify channel numbers or dimmer numbers with a channel or dimmer key; the console automatically assumes that the channel is addressed in the first part of the command and the dimmer in the second part, unless the [DIMMER] key is used.*

You can also patch ranges of channels to ranges of dimmers in a single command. This is called **range patching**. Range patching commands require that you specify consecutive ranges of dimmers and channels with the Thru [>] key. The quantity of channels and dimmers must also be the same. This feature can save you a considerable amount of time if you are patching large groups of dimmers that are offset from their corresponding channel numbers.



EXAMPLE: To patch channels 1 through 12 to dimmers 13 through 24 in a single command:
[1] [>] [12] [@] [13] [>] [24] [ENTER]
- or -

[DIMMER] [13] [>] [24] [@] [1] [>] [12] [ENTER]

? **BASIC RULE:** *You must specify the same quantity of consecutive dimmers and consecutive channels in range patching commands.*

Unpatching Channels and Dimmers

Unpatching a channel or dimmer means eliminating any patching assignments associated with it. When you unpatch a channel, all dimmers patched to the channel are unpatched. When you unpatch a dimmer, its association with the channel is eliminated, but all other dimmers that are patched to the channel remain patched to it. All special attributes of dimmers and channels remain intact when they are unpatched (i.e., dimmer profiles, dimmer proportional levels, Non-Dim dimmer status, Automated Channel status, etc.).



ADVANCED TOPICS: For more information on dimmer and channel special attributes, see Chapter 20, *Advanced Patching Options*.

To perform unpatching, you use the (UNPCH CHANL) or (UNPCH DIM.) soft keys, found in the Patch: By Channel and Patch: By Dimmer displays, respectively. To unpatch a channel you must be in the Patch: By Channel display, and to unpatch an individual dimmer you must be in the Patch: By Dimmer display.



EXAMPLE: To unpatch channel 2 through 7 in the Patch: By Channel display:
(UNPCH CHANL) [2] [>] [7] [ENTER]




EXAMPLE: To unpatch dimmers 7 and 24 in the Patch: By Dimmer display:
(UNPCH DIM.) [7] [+] [24] [ENTER]


Default Dimmer or Channel

In both Patch: By Dimmer and Patch: By Channel displays, one line of the patch is highlighted in reverse video. This indicates the default dimmer or channel for entering commands. If a command is begun using the [@] key, the console automatically inserts the default dimmer or channel prior to the "@" in


the Command Line. The default channel (or dimmer) is the channel (or dimmer) that was affected by the last patch command.

 **EXAMPLE:** If the current default in the Patch: By Channel display is channel 15, pressing the @ key would cause the following to appear on the Command Line:


"Channel 15 @" (The console is now waiting for you to provide a dimmer number list. You do not need to use the [DIMMER] key - the console is expecting a dimmer number at this point.)

 **EXAMPLE:** To patch the default channel to a dimmer list in the Patch: By Channel display:


[@] [# list] [ENTER]

 **EXAMPLE:** To unpatch the default channel in the Patch: By Channel display:

(UNPCH CHANL) [ENTER]

 **EXAMPLE:** To patch the default dimmer to channel 2 in the Patch: By Dimmer display:


[@] [2] [ENTER]

 **EXAMPLE:** To unpatch the default dimmer in the Patch: By Dimmer display:

(UNPCH DIM.) [ENTER]

Patch 1 To 1

Use the (PATCH 1 TO 1) soft key in both the Patch: By Dimmer and Patch: By Channel displays to patch each control channel to the dimmer of the same number (i.e. channel 1 at dimmer 1, channel 2 at dimmer 2, etc.). This is the default setting for the patch table. The (PATCH 1 TO 1) soft key is available in the Patch display to return the patch to a one to one channel/dimmer assignment. Parked dimmers, Non-Dim dimmers, proportional dimmer levels, and profiles are retained when you execute this command. The console prompts you to confirm the Patch 1 To 1 command with a second press of the [ENTER] key before the command is executed.

 **EXAMPLE:** To establish a 1 to 1 patch in the Patch display:

1. (PATCH 1 TO 1) [ENTER] ("OVERWRITE WARNING" confirmation request appears.)
2. [ENTER] (Executes the command.)



ADVANCED TOPICS: See Chapter 20, *Advanced Patching Options*.

Automated Channels

You can designate any channels as Automated channels in the Patch display. Automated channels are not affected by the Grandmaster fader, the Blackout switch, or submaster Bump buttons in Solo mode. Use Automated channels to control automated equipment such as color scrollers and moving lights.



ADVANCED TOPICS: For more information on Automated channels, see Chapter 20, *Advanced Patching Options*.

CHAPTER 6:

Setting Channel Levels

Two-Scene Preset Mode*

**(Encore models 24/48, and 48/96 only
Does not apply to models XL or XL/2.)*

When you have the operating mode switch set to TWO-SCENE, the first thing that you will notice is that the crossfader LEDs now indicate the position of the crossfaders. Each crossfader controls the output of one scene, X or Y. The left crossfader controls Scene X so that when the crossfader is at the top of its travel, scene X is "at full." The right crossfader controls Scene Y so that when the crossfader is at the bottom of its travel, Scene Y is at full (backwards to crossfader X). When both crossfaders are moved together, the look on stage fades from the contents of one scene to the other scene. By having separate crossfaders, you can fade one scene in before the other fades out, or vice-versa. This type of crossfader is called a "Split Crossfader".

When in Two-Scene mode, you cannot affect live channel levels on stage with the keypad. The only levels that will appear on stage are those that originate from the channel faders or from submasters. When you are working in any of the "blind" displays (Submaster, Group, or Effect), you can edit channel levels only with the keypad. (This is different from Multi-Scene mode.)

? **BASIC RULE:** *In Two-Scene Preset mode, the channel fader positions always determine the stage output levels. If you move channel faders while you are working in a blind display, it will affect live levels on stage.*

Channel Faders vs. Keypad in Multi-Scene Mode*

**(Encore models
24/48, and 48/96 only.
Does not apply to models XL or XL/2.)*

In Multi-Scene mode, you can use the keypad or the channel faders to enter, record and edit the levels in console memory, and play the cue back later with the GO button. This is one difference between the Two-Scene Preset mode and the Multi-Scene (memory) mode of operation.

In Two-Scene Preset mode, the channel faders always control live stage levels. You cannot use the channel faders to edit any blind displays. When you are

working in Multi-Scene mode, you can control channel levels in any display with either the channel faders or the keypad. If you want to use a channel fader to control a channel level that has been set by the keypad or by a cue, you must first move the channel fader to match the current level of the channel in the display. As soon as the level is matched, the channel level changes color to indicate that the fader now has control. This is referred to as “**match and grab**” operation. You can set the level anytime with the keypad, but the fader must always match and grab if it is not set at the channel’s current level.

When you change between different displays, the level for a given channel may be shown in the new display at a different level than is indicated by the fader position. You must match and grab the channel with the channel fader to control the level with the channel fader in this display. Once you have matched and grabbed in the new display, you must match and grab again in any previously selected display in order to control the channel there with the fader.

? **BASIC RULE:** *The following actions can cause the channel faders to temporarily lose control over their*

channels when you are working in Multi-Scene mode

✍ *Setting levels with the keypad*

✍ *Executing cues with the GO button*

✍ *Using a fader to control the channel level in a different*

display

You must match and grab in order to regain fader control over these channels

The channel faders affect channels differently depending on the current display. In "live" displays (Stage and Playback), the channel faders affect live levels on stage. In "blind" displays (Preview, Group, Submaster, Playback and Tracksheet), channel faders control the channel levels, but only within that display, not on stage. You can edit channels in these "blind" displays using both the channel faders or the keypad.

✍ **EXAMPLE:** To set a submaster "blind" with the channel faders:

1. [SUB] (Use the [SUB] **display** key, not the [SUB] **data entry** key.)
2. (SEL SUB) [#]
3. Move channel faders to establish desired levels.

? **HINT:** *In the example above, when you select a different submaster, the previous sub remembers the levels set by the channel faders.*

? **HINT:** *If you edit a submaster blind while it is active, the edits show on stage as you make them.*

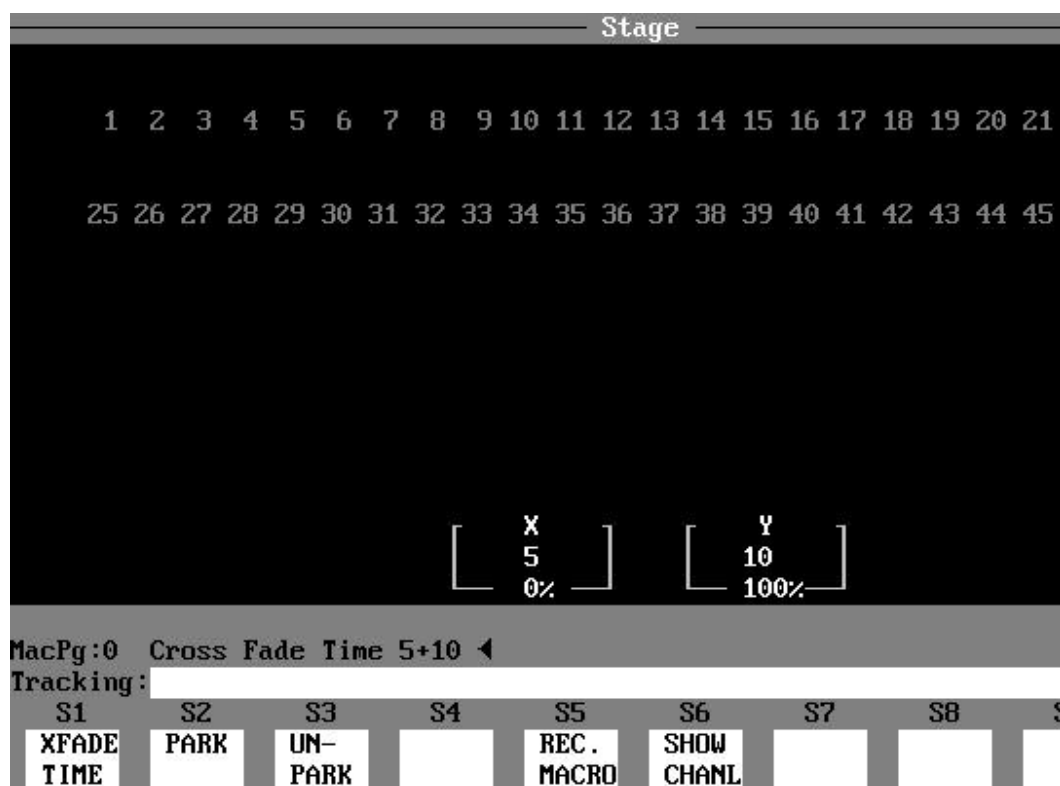



Figure 6.1, Cross Fader Boxes

Crossfader Time*


**(Encore models 24/48, and 48/96 only.)*

Does not apply to models XL or XL/2.)

The crossfade time is the time it takes for the fade to occur when the crossfader handle is moved to the end of its travel. The relative crossfader levels (%) appear in two boxes in the lower part of the display (see Figure 6.1). The crossfade time (seconds) for the respective crossfaders is also shown in the boxes. The time can be set differently for each crossfader using the (XFADE TIME) soft key. You can also control the crossfade time manually.

 **EXAMPLE:** To set a crossfade time of 5 seconds on the X fader, and 10 seconds on the Y fader:

(XFADE TIME) [5] [+] [10] [ENTER]

 **EXAMPLE:** To set the crossfaders for a manual crossfade:

(XFADE TIME) [0] [+] [0] [ENTER]


- or -


(XFADE TIME) [ENTER]

Keypad Commands


In the Multi-Scene mode, channel levels are entered and recorded through the Command Line by using the Data Entry Keypad. When a number is entered into the Command Line, the console automatically assumes by default that channels are being addressed (there is no channel key). The [DIMMER] key is available to directly control individual dimmers, and for use in patching commands.

? BASIC RULE: *There is no “channel” key; when you enter a number in the Command Line by pressing the key, the console automatically assumes that the number is a channel number.*

 **EXAMPLE:** To set channel 2 to a level of 75%:
[2] [@] [75] [ENTER] (“Channels 2 @ 75%” appears in the Command Line.)


 **ADVANCED TOPICS:** See the Dimmer Check topic in Chapter 12, *Utilities, Warnings, Printing, And Default Settings*.

You do not need to enter a zero when you specify a level that is a multiple of ten. If you enter [5], the console assumes you mean 50%; if you enter [8], the console assumes you mean 80%; etc.

 **EXAMPLE:** To set channel 2 to a level of 70%:
[2] [@] [7] [ENTER] (“Channels 2 @ 70% ” appears in the Command Line.)

Channel Lists

You can use the AND [+], THRU [>], and MINUS [-] keys to make lists of channels and other items. You are not required to enter the list in any particular order. You can generally just enter channel lists in the order in which you might be thinking of them.

 **EXAMPLE:** If you enter key strokes as follows:
[12] [>] [24] [+] [36] [-] [23] [>] [13] [@] [FULL] [ENTER]

“Channels 12 > 24 + 36 - 23 > 13 @ Full” appears in the Command Line. Since only channels 12, 24, and 36 are set to Full level by the command, it would have been easier to enter:

[12] [+] [24] [+] [36] [@] [FULL] [ENTER]

? **HINT:** *Items using the [THRU] key may be listed from lowest to highest, or highest to lowest.*

✍ **EXAMPLE:** The basic channel and level Command Line syntax in any channel/level display:
 [#] [@] [#] [ENTER] ("Channels # @ # "
 appears in the Command Line.)

✍ **EXAMPLE:** Listed below are common examples of channel/level command variations:

[#] [@] [#] [ENTER]	(Sets single channel to a level.)
[#] [+] [#] [@] [#] [ENTER]	(Sets 2 different channels to same level).
[#] [>] [#] [@] [#] [ENTER]	(Sets a list of consecutive channels to same level.)
[#] [>] [#] [-] [#] [@] [#] [ENTER]	(Sets a list of consecutive channels minus a single channel to the same level.)

Captured Channels

The term "captured channels" refers to channels with levels that are currently being set. Captured channel levels are shown in reverse video in the display. When a level setting command is entered in the Command Line, the channels listed in the command are "captured." All captured channels are under direct control of the wheel (see the next topic, Wheel). When levels are captured, any command that begins with [@] will affect the currently captured channels.

✍ **EXAMPLE:** To set channels 6 - 9 at 100%, then reset at 65%:

1. [6] [>] [9] [@] [FULL] [ENTER] (Channels 6 - 9 set at 100%, remain captured.)
2. [@] [65] [ENTER] (Channels 6 - 9 set at 65%, remain captured.)
3. Press the [CLEAR] key to release the captured channels.

? **BASIC RULE:** *The [CLEAR] key releases captured channels, but the Command Line must be "empty", or else the [CLEAR] key acts like a "backspace" key to clear keystrokes from the Command Line.*

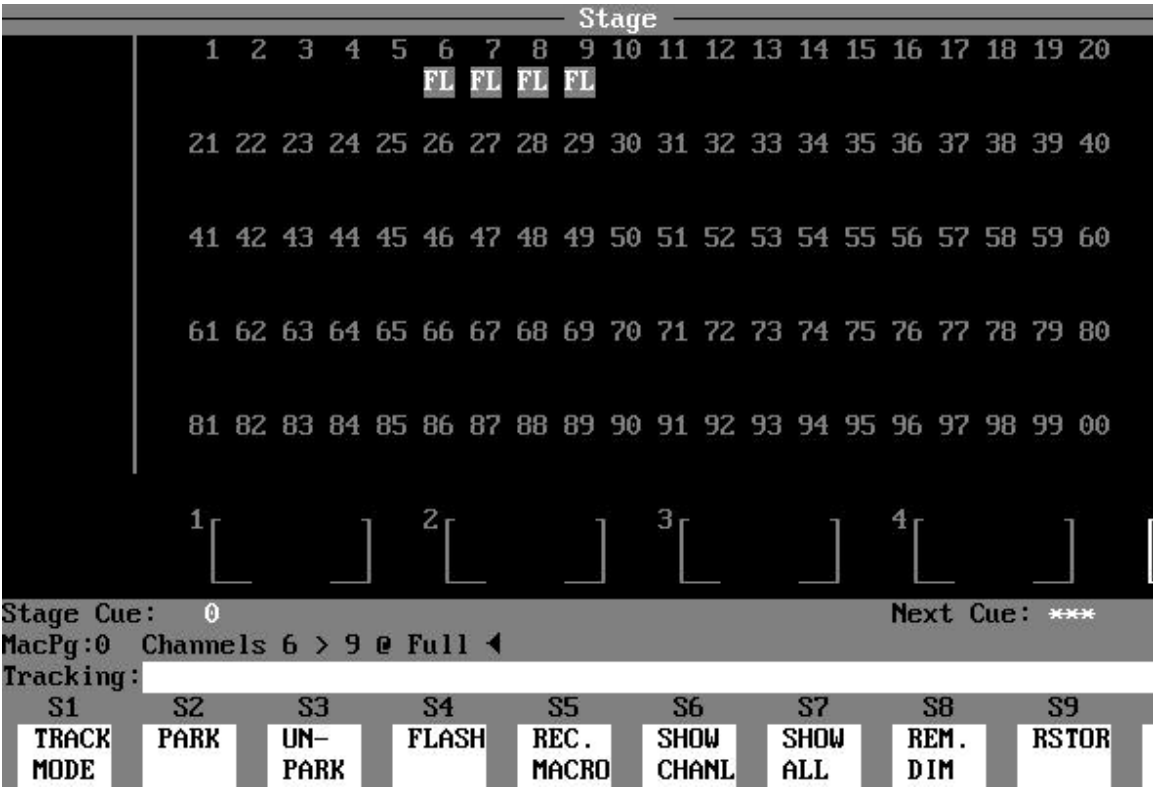





Figure 6.2, Captured Channels


You do not need to set channels to a level in a command to capture them. They can be captured by simply listing them and pressing [ENTER].


 **EXAMPLE:** To capture a single channel, without setting a level:
[#] [ENTER]

 **EXAMPLE:** To capture channels 5 - 20 and channel 30, without setting a level:
[5] [>] [20] [+] [30] [ENTER]


When the Command Line is “empty” and no channels are currently captured, pressing the [ENTER] key captures all active channels (all non-zero channels). The exception to this is that pressing [ENTER] does not capture any Automated channels. Automated channels must be addressed specifically.

 **ADVANCED TOPIC:** See the Automated Channels topic in Chapter 20, *Advanced Patching Options*.

 **EXAMPLE:** To capture all **active** channels (channels reading above zero):
[ENTER] (All channels reading above zero are now captured on the wheel.)


 **BASIC RULE:** *All captured channels are unaffected by executed cues; pressing the GO button does not affect them, even if the channels have new level assignments in the new cue. Captured channels remain under active control of the wheel until control is released by pressing the [CLEAR] key.*


BASIC RULE EXCEPTION: *The exception to the rule above is when the [GO TO CUE] key is used in the Tracksheet or Preview displays.*


 **ADVANCED TOPICS:** See Chapter 9, *Playing Back Cues*.

Wheel Control

The wheel is used to adjust the levels of individual or multiple channels proportionally up or down. Whenever any channels are captured, their levels are adjustable on the wheel.

 **EXAMPLE:** To set channels to 50%, and then use wheel control to adjust the level in the Stage, Preview, Group, Submaster and Tracksheet displays:
[# list] [@] [50] [ENTER] (Channel list now active on the wheel, even if the level specified is zero.)

 **EXAMPLE:** To capture channels at their active levels in the Stage, Preview, Group, Submaster and Tracksheet displays:
[# list] [ENTER] (Channels in list now captured and controlled by the wheel.)

 **NOTE:** *If you find that the tracking color of certain channels is not appropriate to the display, you may have moved the wheel accidentally while channels were captured. There is a possibility of the wheel moving so slightly that the movement is noted internally without changing the channel level in the display. If you find that the tracking color has changed, it may be prudent to confirm that levels are still tracking by checking the Tracksheet display.*



ADVANCED TOPICS: See Chapter 10, *Editing Cues And Using Track Modes*.

Proportional Control with the Wheel

All captured channels are affected proportionally when you use the wheel. Proportional control operates such that a given rotation of the wheel may cause a greater change to a higher level than to a lower level. For example, if a channel is captured at 10% and the wheel spins 1/2 a rotation, the level may increase to 20% (10 points). If the same channel is captured at 40%, and the wheel spins 1/2 a rotation, it may increase the level to 80% (40 points).



EXAMPLE: Channel 1 is at 25%, and channel 2 is at 50%. Channels 1 and 2 are both then captured and thus "captured on the wheel." If the wheel is used to move channel 1 to 50%, channel 2 will be brought to full. If the wheel is moved further, channel 1 will increase until it reaches full also. This is known as "overranging". As the wheel is used to lower the levels, channel 1 will start to come down from full first. When it reaches 50%, channel 2 will begin to come down. Eventually you can return all channels under control of the wheel to their original levels, provided that you maintain wheel control over them.


Because you can control levels proportionally with the wheel, you can increase the intensity of a lighting look on stage without changing the feel of the look or the mix of the colors. And because of the ability to overrange with the wheel, you have the opportunity to "run all channels up to full" and still be able to return to your original look.

The wheel also responds to movements based upon the speed with which the movements are made. A 1/4 rotation made slowly may raise a level by 20 points, while the same rotation made rapidly might raise the level by 50 points. The wheel is said to have "ballistics". This helps the wheel to have a better "feel" and to respond more quickly to your movements.

Restoring Channel Levels ("Undo")


You can use the (RSTOR) soft key command to return channel levels to their level prior to the last level setting command. The (RSTOR) soft key is available in the Stage, Preview, Group, Submaster and Tracksheet displays. Although the previous level command may not be present in the Command Line history, it remains available to the Restore command.

Channels may be selectively restored by entering a list of channels which are to remain at their current level.

 **EXAMPLE:** To restore channel levels from the Stage, Preview, Group, Submaster and Tracksheet displays:

(RSTOR) [ENTER]	(Restores all channels.)
- or -	
(RSTOR) [# list] [ENTER]	(Restores only the channels in list.)

Using the (RSTOR) soft key repeatedly toggles between the last two consecutive levels that a channel has been assigned.

 **EXAMPLE:** To toggle a channel's last two assigned levels in the Stage, Preview, Group, Submaster or Tracksheet displays:


1. [# list] [@] [#] [ENTER]
2. [RSTOR] [ENTER] (Displays channel levels set before last level setting command.)
3. (RSTOR) [ENTER] (Toggles back to the new levels set by the last command.)

In the Stage display, the Restore command always restores channels to the levels assigned just prior to the last changes that you made. You can switch to another display, edit channel levels, return to the Stage display, and still use the Restore command to return to the previous stage levels.

The Restore command remembers the last level changes you made in an editing display (Preview, Group, Submaster, or Tracksheet). Once you edit in another 'blind' display, the Restore command memory is active only for that display (as well as in Stage display).

Remainder Dim Command


Use the Remainder Dim (REM. DIM) soft key to make all channels, except those specified in the command, go to a level of 0%. The (REM. DIM) soft key is available in the Stage, Preview, Group, Submaster and Tracksheet displays. The command syntax allows you to list the channels that you want to stay at their current levels, and thereby force the remainder of the channels to dim to zero.

 **EXAMPLE:** To dim all channels except a specified list of channels, in the Stage, Preview, Group, Submaster and Tracksheet displays:

[# list] (REM. DIM) [ENTER]

? **HINT:** *In the Example above, pressing the (RSTOR) key will restore channels to their previous settings.*

You can specify a new level for a channel list when you use the Remainder Dim command.

 **EXAMPLE:** To specify a level of 50% for a channel list and take all other channels to zero:
[# list] [@] [50] (REM. DIM) [ENTER]

CHAPTER 7:

Basic Submaster Operation

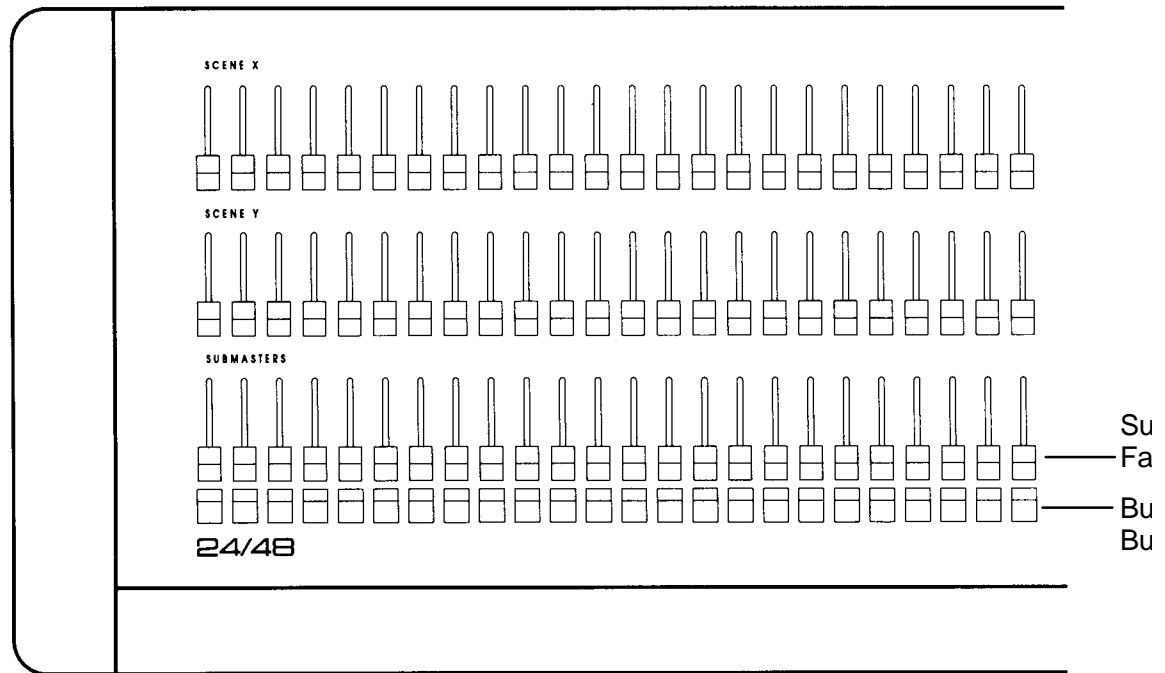







Figure 7.1, Submaster Faders and Bump Buttons

Submasters

Submasters are fader controls on the console top panel that can have multiple channels assigned to them at different levels. In this way, you can record stage "looks", and recall them by moving a submaster fader to restore the look at various intensities. Submasters can also be used to play back different effects, or to "inhibit" specific channels from going above the current level of the submaster. Submasters are often referred to as "subs."


The Playback display contains the Submaster Fader Window, a section of the screen that lists all the submaster fader numbers and their current levels. In the Submaster Fader Window, submaster fader numbers are shown in different colors according to the following code (shown on next page):

 white	= Normal submaster
 yellow	= Effect submaster
 red	= Inhibitive submaster
 gray	= Unassigned " empty " submaster

 **ADVANCED TOPICS:** See Chapter 17, *Advanced Submaster Operation*.

Normal Submaster

A normal submaster has channels at specific levels assigned to it. When these channels are assigned, they are not "robbed" from any of their other assignments. The same channel can be assigned a unique level in any number of submasters. This is because normal submasters operate in what is called a "Pile-On" mode; for any given channel, the highest level from any submaster takes precedence.


 **EXAMPLE:** Let's say channel 21 is assigned to submaster 5 at a level of 40% and to submaster 6 at a level of 70%. In the Stage display, when submaster 5 is brought to Full, channel 21 reads at 40%. If submaster 6 is brought up, channel 21 begins to increase when submaster 6 brings the level over 40%. When sub 6 finally reaches Full, channel 21 reads at 70%.

You can create submasters in two different ways:


-  "live" with the [RECORD SUB] hard key
-  "blind" in the Submaster display


Record Sub Command


The [RECORD SUB] hard key records the instantaneous "look" of the current Stage display, by recording all channels at their current levels. This includes all levels that may be originating from level setting commands, cues, running effects, or even other subs. The Record Sub command can be executed from any display. When an effect is running, the Record Sub command captures the effect channels at the instant the [ENTER] key executes the command.

 **BASIC RULE:** *Whenever any of the three dark gray "Record" hard keys are used, the channel levels that are currently active in the Stage display are recorded, no matter what display is being viewed when the command is entered.*

? **BASIC RULE:** *Parked dimmer levels are never recorded by the Record commands.*

 **ADVANCED TOPIC:** See the Parking Dimmers topic in Chapter 20, *Advanced Patching Options.*

 **EXAMPLE:** To record the current stage look to submaster 2, from any display:
[RECORD SUB] [2] [ENTER] (Submaster 2 has current stage look recorded to it.)

 **NOTE:** *In the example above, if submaster 2 has already been recorded, an "OVERWRITE WARNING" message will appear on the screen. The message asks you to confirm the command by pressing the [ENTER] key again.*

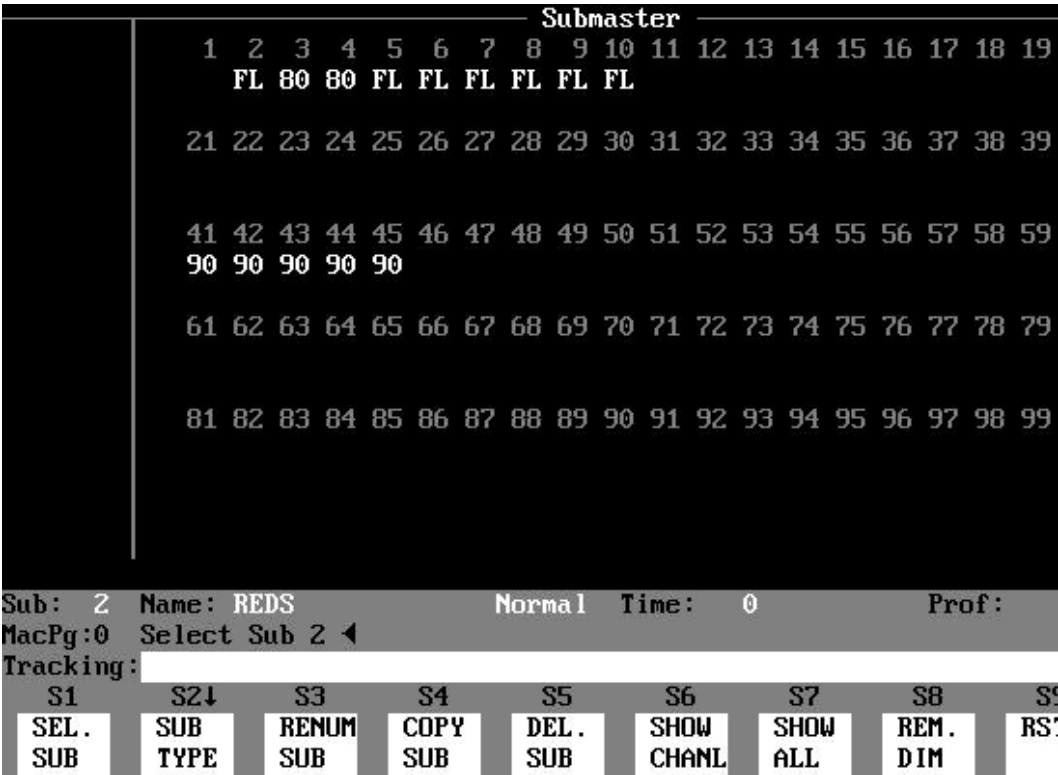


Figure 7.2, Submaster Display

Creating Subs Blind

Submasters can be created "in the blind" by selecting them in the Submaster display. Only one submaster's channel information is shown at a time. Use the [NEXT] and [LAST] keys to view and page through all the different subs. You can select a specific sub for viewing by pressing the (SEL. SUB) soft key, or the [SUB] hard key.



EXAMPLE: To view submaster 2's channel level assignments:
 (SEL. SUB) [2] [ENTER] (Sub 2 appears on the display.)
 - or -
 [SUB] [2] [ENTER]

In the Submaster display, you can assign levels to the currently displayed submaster by assigning channels as you would in the Stage display. When you work with levels in the Submaster display ("in the blind"), your changes are automatically made to the submaster - **no record command is necessary**. Remember that the Submaster display only shows channel levels that are assigned to the individual sub that is currently being viewed.



BASIC RULE: *Whenever one of the three dark gray "Record" keys are used in any display, the current look of the Stage display is recorded at the moment the command is executed with the [ENTER] key. Remember that no Record command is necessary when editing levels or cue parameters in any blind display (Preview, Group, Submaster, Effect, Cuesheet, or Tracksheet).*





Bump Buttons

Bump buttons for each submaster are located directly below the individual submaster faders (see Figure 7.1). Pressing a normal Bump button drives its submaster to Full, for as long as the Bump button is held down. In normal mode, the Bump buttons are momentary switches, so when they are released, the submaster levels return to the current level of the sub fader (zero or otherwise). In Toggle mode, each press of the Bump button turns the sub alternately on and off.




HINT: *Transitions initiated by pressing a Bump button take place in assigned up and down times. If you want a true instantaneous "bump", set the sub time to zero. See the next topic in this chapter, Timed Submasters.*


Each Bump button can be set individually to one of four different modes of operation:

-  **ON** = **Enables** Bump button to read at its assigned level while button is held down (momentary switch action).
-  **OFF** = **Disables** Bump button.
-  **SOLO** = **Inhibits** all channel levels (drives them to zero) except the channels in the "Solo" sub. Only the channels assigned to the Solo sub read on stage when Bump button is pressed.
-  **TOGGLE** = **Toggles** between Full and the current level of sub fader, with each press of the Bump button.

A Solo Bump button works like a normal Bump button set to "On", in that it drives the sub to Full. The difference is that the Solo Bump button also "inhibits" all other channel levels (from all sources) for as long as the Bump button is held down. In other words, all active levels are forced to zero except those that are from the submaster. Once the Solo Bump button is released, all channels instantly return to their assigned levels.


 **NOTE:** A Solo Bump button does not affect Automated channels or Parked dimmers.

The right side of the Status Bar in the Submaster display shows the Bump button mode of the currently selected sub. (See Figure 7.2, earlier in this chapter.)

 **Example:** To turn a Bump button On or Off, or to set to Solo or Toggle mode for a selected submaster, in the Submaster display:

1. (SUB TYPE)
 2. (BUMP ON) (Enables Bump button as a momentary switch.)
 - or -
 - (BUMP OFF) (Disables Bump button.)
 - or -
 - (SOLO BUMP) (Sets Bump button to Solo mode.)
 - or -
 - (BUMP TOGGL) (Sets Bump button to Toggle mode.)
- (It is not necessary to press the [ENTER] key.)


Use the (ALL BUMPS) soft key to turn all of the Bump buttons On or Off, or to set all Bump buttons to Solo or Toggle mode, in one command.

 **EXAMPLE:** To turn all Bump buttons On or Off, or set them to Solo or Toggle:


1. (SUB TYPE)
2. (ALL BUMPS) (BUMP ON) (Sets all Bump buttons On.)
 - or -
 (ALL BUMPS) (BUMP OFF) (Sets all Bump buttons Off.)
 - or -
 (ALL BUMPS) (SOLO BUMP) (Sets all Bump buttons to Solo mode.)
 - or -
 (ALL BUMPS) (BUMP TOGGL) (Sets all Bump buttons to Toggle mode.)
 (It is not necessary to press the [ENTER] key.)

Timed Submasters


You can assign fade times to submasters in the Submaster display so that when you press the Bump button, the submaster level fades up or down in the time that you assign. Each submaster can be assigned a different time, and each submaster can be assigned a separate up and down time. The current submaster fade time is shown in the "Time" information field in the middle of the Status Bar, in the Submaster display.

 **EXAMPLE:** To assign an up and down time of ten seconds to sub 5 in the Submaster display:

1. [SUB] [5] [ENTER] (Selects sub 5 as current sub.)
2. [TIME] [10] [ENTER]

 **EXAMPLE:** To assign a split time with a 10 second up time and a 20 second down time to the current sub in the Submaster display:

[TIME] [10] [+] [20] [ENTER]

 **NOTE:** When a sub fader is at zero, the fade from Full to zero will occur in the assigned sub fade time. When the sub fader is set at a level other than zero, the fade time is proportional to the level. For example, if the fade time is 10 seconds, and the fader level is at 30%, the fade from 30% to Full takes 7 seconds.

Submaster Profiles



You can assign a profile to a submaster the same way you assign a profile to a cue. As the submaster fader is moved, the channel levels on stage follow the profile curve. Submaster fades that are initiated with Bump buttons also follow the assigned profile curve



ADVANCED TOPICS: See Chapter 18, *Profiles*.

Selective Recording (Updating) of Subs

When you record subs (and cues or groups), you may want to record only a specified list of channels rather than all channels that are active on stage. There are two ways to define the channels that you want to record:

-  Specify the channels that you want to **include in** the Record command.
-  Specify the channels that you want to **exclude from** the Record command.

? BASIC RULE: *Whenever you execute a Record command, the console assumes that you want to record live levels for all channels, unless you specify a different list of channels, or specify a list of channels to be excluded from the list of all channels.*














ADVANCED TOPICS: See Chapter 24, *Selective Recording*.


CHAPTER 8:

Creating and Recording Cues

Cues

Cues are recorded lighting changes or "looks" that can be reproduced with specific timing. A cue is recorded as a set of channels with specified levels, along with certain other attributes. A cue always has an execution time, but it may also be assigned any of the following additional attributes:

-  Delay Time
-  Custom Fade Profile*
-  Effect*
-  Fade Effect*
-  Link Return*
-  Follow*
-  Cue Macro*
-  Cue Name*
-  Split Time*
-  Multiple Parts*
-  Link to Non-Sequential Cue*
(with or without specified Link Repetitions*)

 ***ADVANCED TOPICS:** For more about the cue attributes marked with an asterisk, see Chapter 19, *Advanced Cues*.

The cue attribute hard keys are located on the main keypad in the right hand column, under the [CUE] hard key.

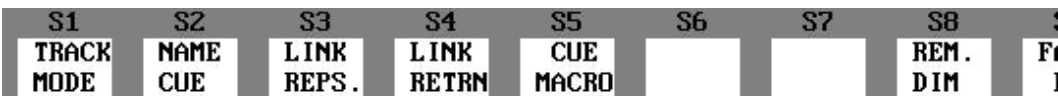












Figure 8.1 Cue Attribute Soft Keys

There are additional cue attribute keys that exist as soft keys. These soft keys appear as soon as you press the [RECORD CUE] or [CUE] hard key. When you have completed your command, the soft keys change back to the soft keys that appear normally in the current display.


You may create or re-record cues "live" in any display, or you may create and edit cues and attributes "blind" in the Preview, or Tracksheet displays. Cue attributes may be edited "blind" in the Cuesheet display, as well. The different Encore models have different capacities for the total number of cues and groups as listed below:


  Encore model 24/48	300 total cues and groups
  Encore model 24/48 Expanded	550 total cues and groups
  Encore model 48/96	350 total cues and groups
  Encore model 48/96 Expanded	600 total cues and groups
  Encore models XL and XL/2	600 total cues and groups

Cue Time

You must assign an execution time to each cue that is recorded. The cue time is the time the cue takes to fade to its final readings, after the GO button has been pressed. Cue execution time (or "cue time") may be assigned either as a numerically designated fade time or as a manual fade time. A manual fade time indicates that you use a playback fader to manually fade the cue. You can assign a numerical cue time with a value from 0 - 999.9 seconds in 0.1 second increments.

A cue may be assigned a split time, which allows the channels that are going to a higher level to fade in a different time than the channels that are going to a lower level.

 **EXAMPLE:** To assign a cue time of 10 seconds to cue 2, in the Stage, Preview, Cuesheet, Tracksheet, and Playback displays:
[CUE] [2] [TIME] [10] [ENTER]

 **NOTE:** *In the Example above, the command creates the cue if it doesn't already exist.*

Manual Cues

A cue may be played back manually on one of the four playback faders. This allows you to fade at a rate that matches an event taking place on stage. You can reverse directions of the fade by moving the fader handle backwards at any time before completing the fade. When the playback fader handle reaches the end of its travel (at "10"), the fade is complete and the fade is cleared from the playback fader.



ADVANCED TOPIC: See Clearing Fades From The Playback Faders topic in Chapter 9, *Playing Back Cues*.

A Manual time is assigned to a cue by default when no time is specified for the cue. You can also assign a manual time to a cue with the (MAN. TIME) soft key, which is the way to change a timed cue into a manual cue. In Stage, Preview, Cuesheet, Tracksheet, and Playback displays, the Manual Time soft key appears when you press the [CUE] key, the [RECORD CUE] key, or any cue attribute key.



EXAMPLE: To assign a Manual time from any display:
[CUE] [#] (MAN. TIME) [ENTER]
- or -
[CUE] [#] [TIME] [ENTER]



NOTE: In the Stage and Playback displays, starting a command with the [TIME] hard key allows you to change the time of the current stage cue (except cue 0). In Preview, Cuesheet, and Tracksheet displays, the same command changes the time for the current preview cue. In the Cuesheet and Tracksheet displays, the preview cue is indicated on the left side of the display by the caret symbol (>).



ADVANCED TOPIC: See Preview Cue topic in Chapter 10, *Editing Cues And Using Track Modes*.

Cue Numbering

All cues are numbered as they are created. Cues are usually "played back" in a numerically sequential order by using the GO button. "Cue Zero" is always a blackout cue and may never be edited or changed. Cues may be created in any order, however cues played back with the GO button are always executed in numerical order (unless Links have been assigned to cues).



ADVANCED TOPICS: To assign Links to cues, see Chapter 19, *Advanced Cues*.

If you want to play back cues out of sequence you can use the Go To Cue, Go To Link, or Go To Cleanup commands.



ADVANCED TOPICS: See "Go To" topics in Chapter 9, *Playing Back Cues*.

Cue numbers may range from 0.1 to 999.9 in 0.1 increments. This allows you to build your show using cues with whole numbers, and then insert up to 9 cues between existing cues later.



HINT: *Some lighting designers like to number cues so that each scene, dance, or event of their show begins at even hundreds. For example, the cues in scene 1 start at cue 101, the cues in scene 2 start at 201, etc.*

Record Cue Command



BASIC RULE: *You can execute the Record Cue command from any display, but the command always records what is shown in the Stage display. No Record key is ever used when creating or editing in any blind display.*

The [RECORD CUE] key records a cue from the instantaneous "look" of the current Stage display. This includes all levels that may be originating from level setting commands, cues, running effects, or active submasters. The Record Cue command can be executed from any display. If an effect is running, the Record Cue command captures the effect channels at the instant the [ENTER] key executes the command.



HINT: *For the reason stated above, you should maintain your effects on submasters while you are recording cues live. This way you can take out the effect levels with the submaster before you enter the Record Cue command.*


Parked dimmer levels on stage are not recorded, however all channel levels that are shown in the Stage display are recorded.




ADVANCED TOPIC: See the Parking Dimmers topic in Chapter 20, *Advanced Patching Options*.

To assign a time other than the default manual fade time, press the [TIME] hard key and enter a new value in seconds. Times can be entered in 0.1 second increments. A Manual fade time can be selected with the (MAN).

TIME) soft key or simply by not specifying a time, thereby defaulting to a manual fade time.

 **EXAMPLE:** To record cue 2 with a specified time of 10 seconds, in the Stage display:


[RECORD CUE] [2] [TIME] [10] [ENTER]

 **EXAMPLE:** To record cue 2 with a Manual time, in the Stage display:

[RECORD CUE] [2] [ENTER]


- or -


[RECORD CUE] [2] (MAN. TIME) [ENTER]


 **BASIC RULE:** *Whenever any of the three dark gray [RECORD] keys are used, they record the channel levels that are currently active in the Stage display, no matter what display is being viewed when the command is entered. (Parked dimmer levels are never recorded with the Record commands.)*


Selective Recording


When you record cues (subs, or groups), you may want to record only a specified list of channels rather than all channels that are active on stage. There are two ways to define the channels that you want to record:

 Specify the channels that you want to **include in** the Record command.

 Specify the channels that you want to **exclude from** the Record command.

 **BASIC RULE:** *Whenever you execute a Record command, the console assumes that you want to record live levels for all channels, unless you specify a different list of channels, or specify a list of channels to be excluded from the list of all channels.*

 **NOTE:** *The Track mode in effect at the time of the Record command determines what levels are assigned to channels that are not specified in the command.*

 **ADVANCED TOPICS:** See Chapter 24, *Selective Recording*.

Creating Cues Blind

Cues can be created "blind" (while they are not being viewed on the stage). This can be done in any of the three blind cue displays: Preview, Cuesheet, or Tracksheet. While in these blind displays, any cue that you enter in the Command Line is created if it does not already exist. The cue can be created blind by pressing either the [CUE] hard key or the (SELECT CUE) soft key.



EXAMPLE: To create a cue in any of the blind cue displays:

[CUE] [#] [TIME] [#] [ENTER]

- or -

(SELECT CUE) [#] [TIME] [#] [ENTER]

The contents of the cue that is created depends on which tracking mode you are using when the command is executed. If you are in Tracking mode, the cue will be identical to the previous cue, but with **all** soft levels.



EXAMPLE: Let's say cues 6, 6.5, and 7 already exist. If the following command is entered in Tracking mode:

[CUE] [6] [.] [8] [ENTER] (Cue 6.8 is created and is identical to cue 6.5.)

In the Example above, if you are in Cue Only or Clean Up mode, the cue created will be "blank" in the sense that hard zeros are assigned to any channel where a level, hard or soft, occurred in the previous cue. In Clean Up mode, hard zeros are assigned to **all** channels.



ADVANCED TOPICS: For more on Tracking modes, see Chapter 10, *Editing Cues And Using Track Modes*.

If you are in either Preview or Tracksheet displays, you can begin to make channel level commands to edit the cue that you just created. You cannot make level setting commands in the Cuesheet display since you cannot view any of the levels, even though you can create cues while in the Cuesheet display.

CHAPTER 9:

Playing Back Cues

Cuesheet Display

The Cuesheet display is a work space that displays cues for viewing and editing. All cue attributes except channel and level assignments are available for editing. The current cue on stage is shown in a horizontal gray reverse video block. Notice that when you press the GO button, the next cue changes to reverse video, indicating that it is now the current cue. You can view different parts of the cuesheet by pressing the [PAGE UP] and [PAGE DOWN] keys, or the Up and Down Arrow keys. Unlike the Playback display, the Cuesheet display does not keep the current stage cue centered on the screen when a new cue is executed. If you change displays and return to the Cuesheet display, it will always be centered on the current preview cue.

Playback Display

The purpose of the Playback display is for playing back cues. The top of the Playback display shows a section of the cuesheet. The size of the section of cuesheet is defined by the number of cue rows you specify in the Setup display. The Playback display view of the cuesheet centers itself on the current stage cue whenever a cue is executed by using the GO button or the [GO TO CUE] key. The Playback display is not intended to be used for editing cues as in the Cuesheet display. Notice that the Playback display doesn't have any soft keys visible to use for editing.



ADVANCED TOPICS: See the Playback Display topic in Chapter 3, *Displays*.

GO Button

The GO button is used to play back cues sequentially with their recorded fade times. Each time you press the GO button, you execute the next sequential cue. The current stage cue is defined as the cue that is currently fading in, or the last cue that faded in.

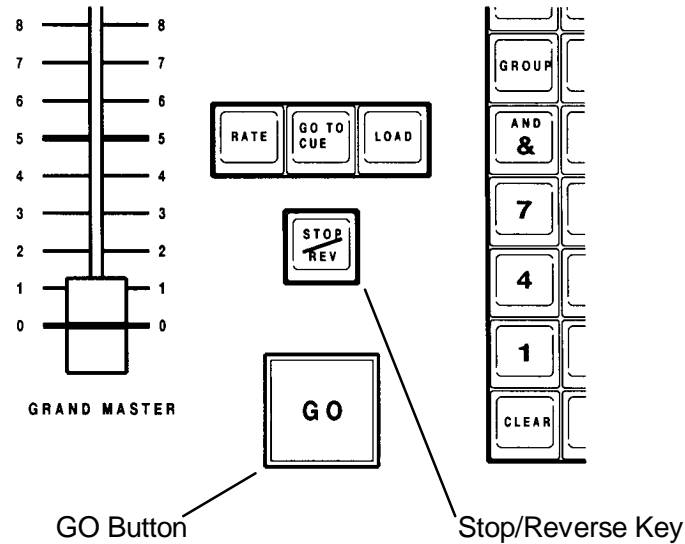



Figure 9.1, GO Button and Stop/Reverse Key

Stop/Reverse Key

The [STOP / REV] key has a dual function. If any cues are currently running in assigned fade times, you can press the Stop/Reverse key once to stop all the fades immediately. If you stop fades in this way, "STOP" appears in the Playback Fader Boxes on the display. Pressing the Stop/Reverse key a second time causes a reverse fade to the previous cue in two seconds. When no fades are currently running, pressing the [STOP / REV] key causes a fade to the previous cue in two seconds. The [STOP / REV] key functions are summarized below:

✂✂ For running fades	= Stops the fade
✂✂ No running fades	= Reverses (fades to previous cue)
✂✂ For stopped fades	= Reverses (fades to previous cue)

 **NOTE:** It is not necessary to press the [ENTER] key with Stop/Reverse commands.

? BASIC RULE: *If timed cues are running when the [STOP / REV] key is pressed, it stops all active fades immediately. If no timed cues are running when the [STOP / REV] key is pressed, the console reverses and fades to the previous cue in two seconds.*

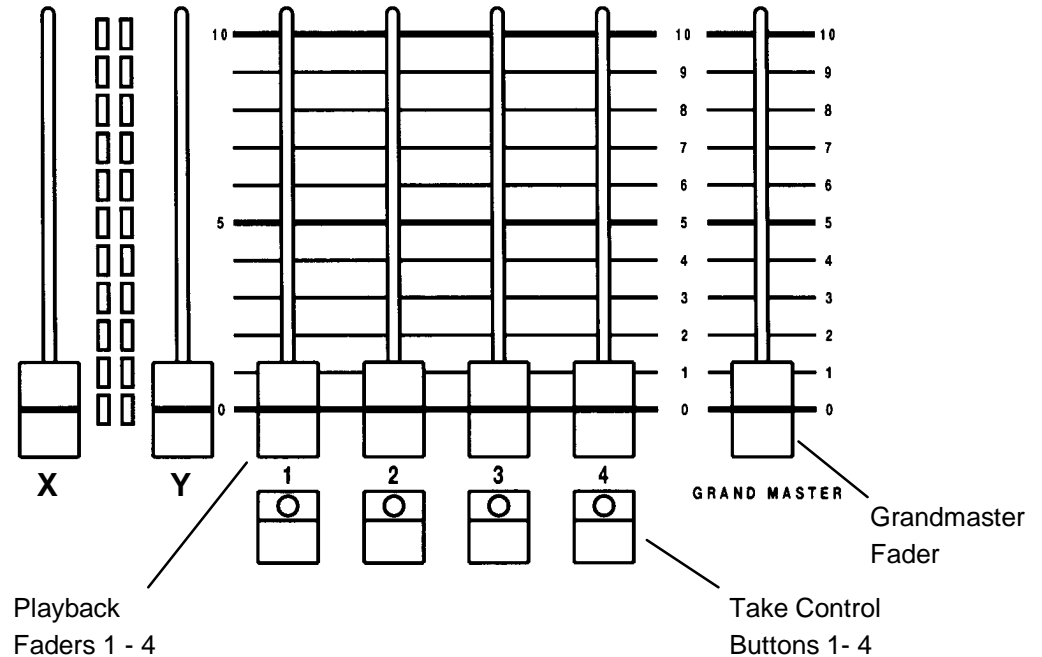


Figure 9.2, Playback Faders, Grandmaster Fader

Playback Faders

Whenever cues are played back, in or out of sequence, the cue fades are loaded to physical playback faders, numbered 1 - 4. The playback faders can be thought of as "conduits" through which all cue fades must pass to get to the stage. When you press the GO button, the next cue is loaded on the lowest numbered fader that is available. Cues assigned a numerical fade time begin to fade automatically. When the cue fade is complete, the cue is automatically cleared from the fader.

Moving the playback fader handle does not affect the execution of a timed cue, unless the cue is taken over manually with the Take Control button. See Taking Manual Control Of Timed Cues topic, later in this chapter.

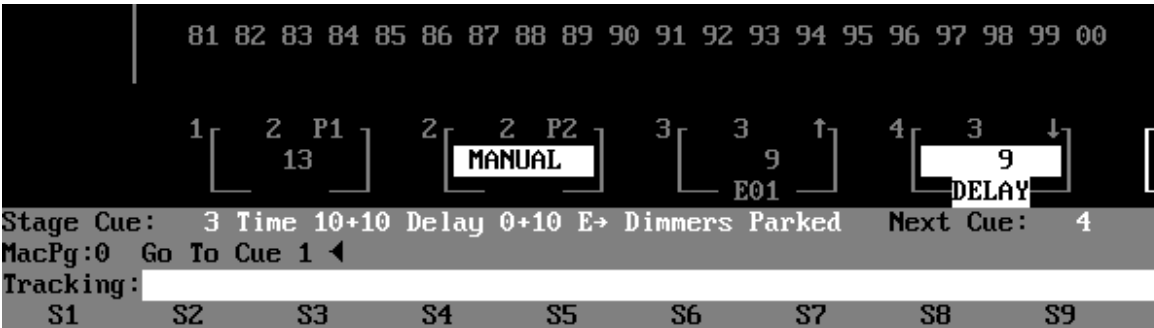


Figure 9.3, Playback Fader Boxes

Playback Fader Boxes

In the Stage and Playback displays (the two "live" displays), the four Playback Fader Boxes show you the current status of the four playback faders. Four fades may be monitored at a time in the Playback Fader Boxes. Additional timed fades run "in the background" and appear on the screen automatically when shorter timed fades run out (this is called fader hierarchy). In each Playback Fader Box, the cue number is shown on the first line, and the cue fade time is shown on the second line. If the cue fade time is manual, the time is shown as "MANUAL" in reverse video. When an effect is running on the playback fader, the effect number is shown at the bottom of the Playback Fader Box.



ADVANCED TOPICS: See Chapter 15, *Effects*.

Grandmaster Fader Box

To the right of the Playback Fader Boxes is the Grandmaster Fader Box that shows you the current level of the Grandmaster Fader. Whenever the Grandmaster level drops below Full, the level indicated in this box flashes. If the Grandmaster reaches zero, the level changes to the flashing red letters "B.O.", to indicate a blackout condition on the stage. The flashing red "B.O." also shows when the Blackout switch is in the Blackout position.

Manual Fades




Cues that are assigned a Manual fade time load to the lowest numbered playback fader when you press the GO button, and **wait to be executed by the movement of the fader handle**. The fade takes place as you move the handle along to the completion of its travel. When the handle reaches the top of the fader (at 10), the fade is complete and is cleared from the fader automatically (when the console is in Automatic Fader Clear mode). You may reverse the direction of the fade anytime before you reach the top of the fader travel, but once you get to 10 the fade is complete and cleared from the fader.



ADVANCED TOPIC: See the Automatic Fader Clear Mode vs. Manual Fader Clear Mode topic later in this chapter.

Take Control Buttons

Underneath each playback fader is a Take Control button with a green LED in it. Use the Take Control buttons to change fades from timed to manual, or to clear manual fades from the playback faders. The LEDs indicate the current status of each playback fader as follows:

-  LED is **on**: = **A timed fade** is currently running on the playback fader.
-  LED is **flashing**: = **A manual fade** is currently loaded on the playback fader, or manual control has been taken over a timed fade.
-  LED is **off**: = **No fade** is currently running on the playback fader (the fader is "empty").

Taking Manual Control of Timed Cues

As a timed cue is running on a playback fader, you can take manual control of the fade and complete it using the playback fader handle. To change the fade to a manual fade, press the Take Control button that is located directly below the playback fader. The remaining part of the fade is immediately assigned to the playback fader. The fade actually ceases running until you continue it by moving the playback fader. You can complete the remainder of the fade as though it were a manual fade. When you stop a fade with the Take Control button, the LED flashes and the Playback Fader Box shows the word "MANUAL" in reverse video.



NOTE: *You cannot reverse the direction of a fade beyond the point where you took manual control of it. If you took control of a ten second fade after five seconds, only the last five seconds of the fade is available to control with the playback fader. You cannot go back to the beginning of the cue without using the Reverse command. (See the Stop/Reverse topic later in this chapter).*

If you want to simply speed up the rate of a running timed fade without stopping it to take manual control, you can use the Rate command.



ADVANCED TOPICS: For more on Rate commands, see Chapter 22, *Controlling Fade And Effect Rates With The Wheel*.

Clearing Fades From the Playback Faders

When a manual fade is currently loaded to a playback fader, you can clear the fade from the fader by pressing the Take Control button. The playback fader immediately becomes "empty" and the stage maintains the look that it had at the moment you cleared the fader. Your position in the Cuesheet is as though you had completed the fade for that cue, although you may not have gotten to the end of the fade.

When a timed fade is currently running on a playback fader, you can clear the fade by first pressing the Take Control button once to make the fade a manual fade, then pressing it a second time to clear the playback fader. The stage is left with the look that it had when you first pressed the Take Control button and changed the fade to a manual fade, unless you have since moved the playback fader.



BASIC RULE: *If the Take Control button LED is on steady, pressing the button takes manual control of the fade. If the LED is flashing, pressing the button clears the fade from the fader **instantly**, leaving the stage at its current level.*

Automatic Fader Clearing Mode vs. Manual Fader

Clearing Mode: In the Setup display, you can set the Fader Clearing mode to either AUTOMATIC or MANUAL. The "normal " setting is Automatic Fader Clearing mode. This means that a fade automatically clears from the playback fader when the fade is completed. For timed fades, the fade

clears when the fade time is complete. For manual fades, the fade clears when the fader handle is moved all the way up to "10".

In Manual Fader Clearing mode, fades do not clear from the playback faders until you press the Take Control button below the fader. When timed fades complete their fades, they become manual fades. Once a timed fade is complete, you may do either of the following:

- ✍✍ Reverse the fade by moving the fader handle to 10, to gain control of the fade, and then move the fader handle back down. (Note that the fade remains on the playback fader.)
- or -
- ✍✍ Press the Take Control button to clear the fade from the playback fader. (Note that all channels remain at their current levels.)

In Manual Fader Clearing mode, manual fades do not clear when you reach 10, as they do in Automatic Fader Clearing mode. You can either reverse the fade with the handle, or you can press the Take Control button to clear the fade, leaving channels at their current levels.

Manual Fader Clearing mode is generally used more often in television studios, where cues are assigned their own channels separate from other cues. This works well in conjunction with the [LOAD] key, and when there are only a few different cues in a show. This allows you to use the larger faders to control levels for different areas, as though they were submasters. Keep in mind that playback faders always operate on a last-action basis, unlike submasters.

The Manual Fader Clearing mode tends to lead to confusion in theatrical applications, where different cues may fade the same channels up or down. In this case, moving the fader handle up may cause lights to fade down instead of up. Also, the last fader handle that is moved takes control of any channels that are common to more than one fader, which can cause a premature loss of channel control. Finally, if you have a show with lots of cues, it's easy to forget to clear the faders with the Take Control button.

? **HINT:** *If you're using your Encore console in a theater environment, don't use Manual Fader Clearing mode.*

Fade Loading Hierarchy / Simultaneous fades

Because there are four playback faders, you can monitor up to four fades simultaneously. Of course, you need to be able to run more than four fades simultaneously. What if you load more than four fades by pressing the GO button repeatedly? Which fades will be loaded on the four playback faders (and shown in the Playback Fader Boxes)? This depends on the order in which the fades were loaded, and which fades are manual fades.

The Encore console can run up to 500 "simultaneous fades", including all effect fades, cue parts, and split fades. There are 124 additional "virtual playback faders" for the purpose of running more than four cue fades at a time. In this way, timed cues are able to run on virtual playback faders that can't be seen, but that continue to run the cue fade to its completion "in the background".

Cue fades are loaded to the lowest available faders first. If there are more than four currently running fades, the oldest fade is assigned to a virtual fader and the new fade is assigned to fader four. In this way you always have the option to take manual control over the most recently started fades.


Manual fades are a special case for fader hierarchy because manual fades require a physical playback fader to be completed. Manual fades take precedence over timed fades for that reason. If the oldest fade is a manual fade and more than four other timed fades are loaded to the playback faders, the oldest of the timed fades will be assigned to a virtual fader, leaving the manual fade on its physical playback fader.

? BASIC RULE: *When there is a combination of four timed and manual fades and a fifth fade is loaded, the oldest **timed** fade will be assigned to a virtual playback fader, which runs in the background.*


When there are manual fades already on the four playback faders, and a fifth manual fade is loaded, the oldest manual fade is temporarily loaded onto a virtual fader, until one of the four playback faders becomes available.

Go To Cue Command

The [GO TO CUE] hard key is used to access cues out of sequence. This command is especially useful for bringing up cues on stage that you wish to edit or re-record.

 **EXAMPLE:** To fade to cue 2 out of sequence:
[GO TO CUE] [2] [ENTER]

The command in the Example above causes a fade to be loaded to a playback fader similar to pressing the GO button. The fade can be switched to a manual fade by pressing the fader's Take Control button, as with any other fade. The factory default fade time for the Go To Cue command is two seconds. You may enter a different time for the fade, or even assign a manual fade time.

 **EXAMPLE:** To fade to cue 2 out of sequence in 10 seconds:
[GO TO CUE] [2] [TIME] [10] [ENTER]



EXAMPLE: To fade to cue 2 out of sequence under manual control:
[GO TO CUE] [2] [TIME] (MAN. TIME) [ENTER]

- or -

[GO TO CUE] [2] [TIME] [ENTER]



HINT: *The Go To Cue command is not a recommended method for playing back cues that use effects, because it stops currently running effects that originated in previous cues. It also resets any count of Link Repetitions that may be active. To playback cues out of sequence while executing their attributes, use the Go To Link or Go To Clean Up command. (See the topic below.)*



BASIC RULE: *The command [GO TO CUE] [ENTER] takes you back to cue zero. It is not necessary to enter the [0] in the command.*




NOTE: *The command [GO TO CUE] [ENTER] does not affect Automated channels. All Automated channels may be set to zero with the command:*

[GROUP] [0] [@] [0] [ENTER]

Go To Link and Go To Clean Up Commands

These special versions of the Go To Cue command are used when you want to execute a cue out of sequence, but you want to use the cue's timing and other attributes. This makes these commands especially useful for live playback situations. When you execute a normal Go To Cue command, it fades to the end look of the cue in 2 seconds. It also stops any running cue effects, and does not fade in any effects assigned to the destination cue, nor does it execute follows or links assigned to it. The Go To Cue command is intended to be used in rehearsal and editing situations.

With the Go To Clean Up and Go To Link commands, the cue executes in its assigned time, including any split times, or as a multipart cue with discrete times on multiple playback faders. Any follows, links, effects, fade effects, cue macros, etc. occur as if the cue had been played back in normal sequential order. Any cue effects that are running continue to run, unless a fade effect for that effect number is assigned to the destination cue. Although the Go To Clean Up and Go To Link commands use the assigned cue time, you can also specify a different time if you wish.

 **EXAMPLE:** To execute a cue live on stage in its assigned fade time with all its cue attributes, from any display:
[GO TO CUE] [CLEAN UP] [#] [ENTER]
- or -
[GO TO CUE] [LINK] [#] [ENTER]



EXAMPLE: To execute a cue live on stage with a different specified fade time with all its cue attributes, from any display:

[GO TO CUE] [CLEAN UP] [#] [TIME] [#] [ENTER]

- or -

[GO TO CUE] [LINK] [#] [TIME] [#] [ENTER]



HINT: *These commands are especially useful when actors have “jumped ahead” in their lines. You can “skip” cues to quickly catch up to them without losing any cue effects that are running. If you wish, you can record the command on a macro key to save time.*

The difference between these two commands lies in how they affect levels on stage. The Go To Clean Up command affects **all** levels on stage, as though the destination cue were a Clean Up cue. Even soft levels in the destination cue will read on stage. It insures that the end look of the cue takes into account any channel changes that may have occurred in “skipped” cues.



ADVANCED TOPICS: See Chapter 10, *Editing Cues and Using Track Modes*.

The Go To Link command affects **only hard levels** in the destination cue (levels that change from the last cue); soft levels in the destination cue do not read on stage. In this way the Go To Link command works like a link.



ADVANCED TOPIC: See Cue Links topic in Chapter 19, *Advanced Cues*.



HINT: *If you are using tracking levels in a live playback situation, use the Go To Clean Up command. If you work exclusively in Clean Up mode and do not use tracking levels, you can use either command with the same result.*

For automated applications where cues are initiated in random order by macro closures, cues can be played back by recording Go To Clean Up and Go To Link commands into macros. Using tracking levels and Go To Link commands allows you to control lighting in separate rooms without affecting the other rooms.

When using MIDI commands, each “Go Cue #” is treated like a link, so don’t use tracking levels if you want to completely change the looks with these commands. You could use tracking levels if you want to control lighting in separate rooms without affecting the other rooms.



ADVANCED TOPICS: See Appendix D, *MIDI Interface*.

CHAPTER 10:

Editing Cues and Using Track Modes

When you record a cue, you can record the channel levels in two ways: as **tracking** levels, or as **non-tracking** levels. You may want some channels to remain at the same level that they had in the previous cue. These non-changing levels can be tracking levels. Tracking levels have no real assigned value; they take on the same value that the channel had in the previous cue. Tracking levels are called “**soft**” levels for this reason. Changing a channel level in a cue may affect the same channel levels in later cues if they are “soft” levels.

In some old theatre lighting systems, a bank of handles connected to resistance dimmers existed for controlling electrical output for selected circuits. These control panels were sometimes called “piano boards” because the original panels were built from upright piano crates. When you wanted to change levels for a cue on a piano board, you moved the handles that you needed to, and left the other handles alone. Those handles that you didn’t move on a piano board are equivalent to channel levels that track through cues in modern consoles that use tracking levels.


Non-tracking levels have a definite value assigned to them; they are unaffected by the channel levels in all other cues. They are referred to as “**hard**” levels for this reason. You can never affect a hard level in a cue by changing a channel level in an earlier cue.

You can determine whether channel levels are recorded as hard or soft levels by selecting different Track Modes when you record and edit cues.

What is the Preview Cue?




The Preview cue is the cue that is currently selected in the Preview display. It is the default cue for any “blind” editing commands that you might enter without specifying a cue number. For instance, if you were in the Preview display and entered the command, “[TIME] [5] [ENTER],” it would change the time for the cue that was currently displayed as the Preview cue.

The Cuesheet and Tracksheet displays also allow blind editing of cues. When you enter a cue editing command in either of these displays, it affects the current Preview cue, just like in the Preview display. In these displays, the Preview Cue is indicated by the caret symbol (>) immediately to the left of the cue number.


 **NOTE:** *If you do not specify a cue number in an editing command while in a “live” display (Stage or Playback), the edit affects the current **Stage Cue**.*

Cue Recording/Editing Modes (Track Modes)

There are three different cue recording/editing modes, called Track modes:

-  Tracking
-  Cue Only
-  Clean Up


Each of these modes affects the relationship of channel levels in a cue to their levels in subsequent cues, in different ways. Before defining the characteristics of each editing mode, it is important to understand how channel level tracking works.

 **BASIC RULE:** *Tracking and Cue Only modes both work the same way when you record cues live from stage with the [RECORD CUE] key. The difference between them occurs when you edit **existing** channel levels in Preview or Tracksheet.*

Selecting the Track Mode

You can select the desired Track mode (Tracking, Cue Only or Clean Up) with the (TRACK MODE) soft key. In appropriate displays, the current tracking mode appears to the left of the Command Line in the Status Bar.

You can select a different Track mode at any time by pressing the (TRACK MODE) soft key. The change is immediate and does not affect the contents of the Command Line. Editing existing cues and creating new cues may have different results in different Track modes.

 **BASIC RULE:** *When you are recording cues live in the Stage display (with the [REC CUE] key), you should select the Track mode before you complete the record command. In the Preview and Tracksheet displays, you should select the desired Track mode before you create or edit any cues.*

? **HINT:** *In any display, you can select the Track mode before completing a command.*

Tracksheet																				
Channel	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
> 3	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
4		30		30		30										50	50	50	50	50
5		30		30		30										00	00	00	00	00
6		30		30		30														
7.5		30		30		30														
8		30		30		30														
9		30		30		30														
10		30		30		30														
11		30		30	80	30														
12		30		30	80	30														
13		30		30	80	30														
14		30		30	80	30														
15		30		30	80	30														
16		30		30	20	30														
Cue: 3 Time 4 Stage Cue: 4 Next Cue																				
MacPg:0 Cue 3 Time 4 ◀																				
Tracking:																				
S1	S2↓	S3	S4	S5	S6	S7	S8	S9												
TRACK	SEL.	RENUM	COPY	DEL.	SHOW	SHOW	REM.	RS1												
MODE	CUE	CUE	CUE	CUE	CHANL	ALL	DIM													

Figure 10.1, Tracksheet Display in Tracking Mode

Tracking Levels

Tracking is a feature that simply allows a level assigned to a channel in one cue to stay at that same level in the next cue. The level is said to “track into” the next cue. The tracking level will continue to appear for that channel in subsequent cues, until a cue assigns a new level to that channel. The tracking levels allow you to edit that channel’s level in a whole series of cues by editing it in the first cue.

? **HINT:** *Tracking is used in theater for basic washes or looks that remain constant throughout a scene from cue to cue. This allows you to quickly edit a basic look for all the cues in the scene by editing levels in the first cue, so that the changes “track into” the following cues.*

There are two kinds of channel level values, depending on the level of the channel in the previous cue. One kind of channel is called a “hard”, or non-

tracking level. Hard levels occur in cues for channels that have different levels than they had in the previous cue. When you assign new levels and record the cue from stage, those channel levels that change are hard, non-tracking levels. The channel levels that remain the same are tracking, or "soft" levels. Soft levels do not have a definite set value; they take their value from the level of the channel in the previous cue.

Soft levels are shown in light gray in all displays that show cue levels (Stage, Preview, and Tracksheet). All hard levels are shown in white in the Tracksheet display. In the Stage and Preview displays, hard levels are shown in different colors. When a level has become higher in value, it is shown in red. If a level becomes lower in value, it is shown in blue. If a level is hard but stays at the same value (a special case), it is shown in white.

Hard and Soft Zeros

"Hard zero" is the term used for zeros that appear as zeros. Although zero is generally considered to be the lack of a level for a channel, you may assign a hard zero to a channel in a cue. This is because some cues (like blackout cues) bring channel levels to zero. Although zeros are never shown in the Stage display, cues that have zero as an assigned level show their hard zeros in blue in the Preview display. Hard zeros are shown in white in the Tracksheet display. Unlike other tracking levels, tracking zeros are never shown in any display.

? **BASIC RULE:** *In the Preview and Tracksheet displays, when no channel level is shown, it is actually a tracking (soft) zero.*

Creating Cues in Tracking Mode

When you are working in Tracking mode, channel levels automatically track the same values from cue to cue, unless you specify a new level for them.

When you record a new cue live from the Stage display, all channels that remain at the same level as in the previous cue will be assigned soft levels; all channel levels that have a new value will be assigned hard levels.

? **BASIC RULE:** *When recording a cue **live** in Tracking mode, only channels that have new levels different from the previous cue will have hard levels; all other channels will have soft tracking levels.*

You can create cues “blind” in the Preview, Cuesheet, Tracksheet and Playback displays by using the [CUE] key followed by the cue number that you want to create. **When you create a cue “blind”** in Tracking mode, its channel levels will be identical to the previous cue, except that all channel levels will be soft levels. You may then edit the cue as necessary.

? **BASIC RULE:** *When creating a cue **blind** in Tracking mode, the cue will be all soft levels, with values identical to the previous cue.*

Creating Cues in Cue Only Mode

In Cue Only mode, **when you record a cue live** on stage using the [RECORD CUE] key, the result is the same as when you are in Tracking mode; only channels with levels that are different from the previous cue are given hard levels, and all other channels are assigned tracking levels. The difference between Tracking and Cue Only modes occurs when you create cues blind or when you edit existing channel levels in Cue Only mode.

? **BASIC RULE:** *When recording a cue **live** in Cue Only mode, the result is the same as in Tracking mode; only channels that have new levels different from the previous cue will have hard levels, and all other channels will have soft tracking levels.*

In Cue Only mode, **when you create a cue blind** in the Preview, Cuesheet, Tracksheet and Playback displays with the [CUE] key, it creates a “blank” cue. Any channels that had a non-zero level in the previous cue have hard zeros assigned to them. This creates a cue with all zero levels, hard and soft, that you can use to build a new cue from scratch.

? **BASIC RULE:** *When creating a cue **blind** in Cue Only mode, a “blank” cue with all levels at zero is created.*

Creating Cues in Clean Up Mode

Clean Up mode is the simplest way of recording and editing cues. Tracking levels do not exist for cues created in Clean Up mode. In Clean Up mode, each cue exists as a separate memory of hard channel levels, with no relationship to each other. No zeros are shown while in Clean Up mode since all cue channel levels are hard levels, and all zeros are also hard levels. If a channel is blank for a cue created in Clean Up mode, it is a hard zero. You must be in Tracking or Cue Only mode to view the hard zeros assigned to a cue created in Clean Up mode.

? **HINT:** *If you do not want to ever use the tracking feature, always work in Clean Up mode.*

When you recording cues live on stage in Clean Up mode, you only affect levels in the cue you are creating. In Clean Up mode, every channel is assigned a hard level. If you don't assign a specific level to a channel in Clean Up mode, a hard zero is automatically assigned to the channel.

When you create a cue “blind” in Clean Up mode, every channel has a hard zero assigned to it. Since you cannot see hard zeros in Clean Up mode, the cue appears as a “blank” cue.

If you change to Tracking or Cue Only mode after you have created cues in Clean Up mode, the cues appear as Clean Up cues. They have the Clean Up attribute assigned to them, and they contain all hard levels, including hard zeros. (See The Clean Up Attribute topic, later in this chapter.)

? **BASIC RULE:** *Every cue created while in Clean Up mode is a Clean Up cue.*

Examples: Creating Cues Blind: Different Track Modes

Use the following example to compare the results of creating cues “blind” in the different Track modes, while in the Tracksheet display.

✍ **EXAMPLE:** In the Tracksheet display, repeat the following five steps in Tracking, Cue Only and Clean Up modes:

1. Select the Track mode using (TRACK MODE) soft key.
2. [CUE] [1] [ENTER]
3. [1] [>] [10] [@] [FL] [ENTER]
4. [CUE] [2] [ENTER]
5. [CUE] [3] [ENTER]

In Tracking Mode: (See Figure 10.2.a.) Channels 1 - 10 are hard levels at Full in cue 1. In cues 2 and 3, the Full levels for channels 1 - 10 are soft/tracking levels.

		Tracksheet																			
Channel		00 01	00 02	00 03	00 04	00 05	00 06	00 07	00 08	00 09	00 10	00 11	00 12	00 13	00 14	00 15	00 16	00 17	00 18	00 19	00 20
1		FL	FL	FL	FL	FL	FL	FL	FL	FL	FL										
2		FL	FL	FL	FL	FL	FL	FL	FL	FL	FL										
> 3		FL	FL	FL	FL	FL	FL	FL	FL	FL	FL										
Cue: 3 Time Manual												Stage Cue: 0						Next Cue			
MacPg:0 Cue 3 ◀																					
Tracking:																					
S1	S2↓	S3	S4	S5	S6	S7	S8	S9													
TRACK MODE	SEL. CUE	RENUM CUE	COPY CUE	DEL. CUE	SHOW CHANL	SHOW ALL	REM. DIM	RST													

Figure 10.2.a, Creating Cues Blind in Tracking Mode

In Cue Only Mode: (See Figure 10.2.b.) Channels 1 - 10 are hard levels at Full in cue 1. In cue 2, channels 1 - 10 are all hard zeros. In cue 3, channels 1 - 10 appear blank (soft zeros).

Tracksheet																									
Channel	0001	0002	0003	0004	0005	0006	0007	0008	0009	0010	0011	0012	0013	0014	0015	0016	0017	0018	0019	0020	0021	0022	0023	0024	
1	FL	FL	FL	FL	FL	FL	FL	FL	FL	FL															
2	00	00	00	00	00	00	00	00	00	00															
> 3																									
Cue: 3 Time Manual													Stage Cue: 0					Next Cue: 1							
MacPg:0 Cue 3 ◀																									
Cue Only:																									
S1	S2↓	S3	S4	S5	S6	S7	S8	S9	S10																
TRACK	SEL.	RENUM	COPY	DEL.	SHOW	SHOW	REM.	RSTOR	REC.																
MODE	CUE	CUE	CUE	CUE	CHANL	ALL	DIM		DISK																

Figure 10.2.b Creating Cues Blind in Cue Only Mode

In Clean Up Mode: (See Figure 10.2.c.) Channels 1 - 10 are hard levels at Full in cue 1. In cues 2 and 3, the channels appear blank while in Clean Up mode. However if you change to Tracking or Cue Only mode, you will see hard zeros assigned to all channels in cues 2 and 3.

Tracksheet																								
Channel	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	FL	FL	FL	FL	FL	FL	FL	FL	FL	FL														
2																								
3																								

Cue: 3 Time Manual Clean-up Stage Cue: 0 Next Cue: 1
 MacPg:0 Cue 3 ◀
 Clean Up:
 S1 TRACK S2↓ SEL. S3 RENUM S4 COPY S5 DEL. S6 SHOW S7 SHOW S8 REM. S9 RSTOR S10 REC.
 MODE CUE CUE CUE CUE CUE CHANL ALL DIM DISK

Figure 10.2.c, Creating Cues Blind in Clean Up Mode


The Clean Up Attribute (Clean Up Cues)


When you are using tracking levels, you sometimes need to stop the tracking levels from continuing into later cues. Typically, this happens at the end of a scene when the basic stage look changes to the look of the next scene. To prevent tracking levels from continuing into later cues, you can assign the Clean Up attribute to a cue. When you assign the Clean Up attribute to a cue, the cue levels all automatically become hard levels. In this way it works like a “wall” that stops all previous tracking levels from continuing into subsequent cues. In the Tracksheet display, a Clean Up cue can be easily identified by its appearance - it looks like a wall of zeros (see fig. 10.3). On the far right side of the Cuesheet and Playback displays there is a special column that identifies Clean Up cues. This is helpful for you to know where your tracking “walls” exist.

Tracksheet																				
Channel	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
156		30				30														
157		30	55	55		30														
158		30	55	30		30														
159		30	55	30		30														
160		30	55	30		30														
161		30	55	30		30														
162		30	55	30		30														
163		30	55	30		30														
164		30	55	30		30														
>165	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
201													75	75		50	50	50	50	50
202													75	75		50	50	50	50	00
202													85	75		50	50	50	50	
203													85	75		50	50	50	50	

Cue:165 Time 0 Clean-up
Stage Cue: 164
Next Cu
MacPg:0 Go To Cue 164 ◀
Tracking:
S1 TRACK MODE S2↓ SEL. CUE S3 RENUM CUE S4 COPY CUE S5 DEL. CUE S6 SHOW CHANL S7 SHOW ALL S8 REM. DIM S9 RS

Figure 10.3, A Clean Up Cue Stopping Tracking Levels

 **NOTE:** Any cue may be created or converted to a "Clean Up cue" by using the [CLEAN UP] key to assign the Clean Up attribute to the cue, regardless of the current Track mode.

 **HINT:** Some designers make the last cue of each scene a Clean Up cue to insure themselves a fresh start for each new scene, with no unwanted tracking levels from the previous "look".

Editing Existing Cue Levels in Different Track Modes

Each of the editing modes (Tracking, Cue Only, and Clean Up) act differently not only when you create new cues but also when you edit existing cues. The same basic principles apply, but each mode has a few unique characteristics when editing existing cues.

Editing Existing Cue Levels in Tracking Mode

Edits made to existing cues while in the Tracking mode will allow any channel(s) assigned a new level to continue to read at that level in subsequent cues until it encounters another hard level. The new level is said to “track through” into later cues. You must be sure you want the new channel level to continue into later cues, because when you change it in Tracking mode it can track through a large number of later cues. Changes made to a soft channel level will always change it to a hard level while in any Track Mode.



EXAMPLE: To see how changes “track through” into later cues, start with the cue levels shown in Figure 10.4.a:

1. [CUE] [15] [ENTER] (Selects cue 15 for editing.)
2. [5] [@] [5] [ENTER] (Channel 5 is set to 50%. The change tracks until cue 20.)

Tracksheet																						
Channel	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22
> 10		30		30	FL	30																
11		30		30	FL	30																
12		30		30	FL	30																
13		30		30	FL	30																
14		30		30	FL	30																
15		30		30	FL	30																
16		30		30	FL	30																
17		30		30	FL	30																
18		30		30	FL	30																
19		30		30	FL	30																
20		30		30	25	30																
21		30		30	25	30																
22		30		30	25	30																
23		30		30	25	30																

Cue: 10 Time 4 Stage Cue: 4 Next Cue: 5
 MacPg:0 Cue 10 Time 4 ◀
 Tracking: Cue 15

S1	S2↓	S3	S4	S5	S6	S7	S8	S9
TRACK	SEL.	RENUM	COPY	DEL.	SHOW	SHOW	REM.	RSTOR
MODE	CUE	CUE	CUE	CUE	CHANL	ALL	DIM	

Figure 10.4.a, Editing in Tracking Mode (before)

Tracksheet																						
Channel	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22
10		30		30	FL	30																
11		30		30	FL	30																
12		30		30	FL	30																
13		30		30	FL	30																
14		30		30	FL	30																
> 15		30		30	50	30																
16		30		30	50	30																
17		30		30	50	30																
18		30		30	50	30																
19		30		30	50	30																
20		30		30	25	30																
21		30		30	25	30																
22		30		30	25	30																
23		30		30	25	30																

Cue: 15 Time 2 Stage Cue: 4 Next Cue:
 MacPg:0 Channel 5 @ 50 ◀
 Tracking:

S1	S2↓	S3	S4	S5	S6	S7	S8	S9
TRACK	SEL.	RENUM	COPY	DEL.	SHOW	SHOW	REM.	RSTOR
MODE	CUE	CUE	CUE	CUE	CHANL	ALL	DIM	

Figure 10.4.b, Editing in Tracking Mode (after)

In the previous Example, the original tracking level of Full in cues 16 through 19 has been replaced (see Figure 10.4.b). The new level “tracked through” into cues 16 through 19, but did not change the hard level in cue 20.

? **HINT:** *If you edit a cue in the **Preview** display while in Tracking mode, the change may track into subsequent cues, but you will not see the*

changes to the other cues. If you edit in **Tracksheet**, you can see the other cue levels that change as a result of your edit.

Editing Existing Cue Levels in Cue Only Mode

Edits made to existing cues while in the Cue Only mode maintain the current levels of the following cue by converting soft/tracking levels to hard/non-tracking levels. Any newly assigned levels do not track into subsequent cues.

? **BASIC RULE:** *In Cue Only mode, the contents of the cue following the cue being edited are always preserved.*

✍ **EXAMPLE:** Using the previous Example, make the same edit to cue 15 while in Cue Only mode. (See Figure 10.4.a.) When you select cue 15 and assign channel 5 a level of 50%, it affects the level of channel 5 in cue 15 only. (See Figure 10.4.c.)

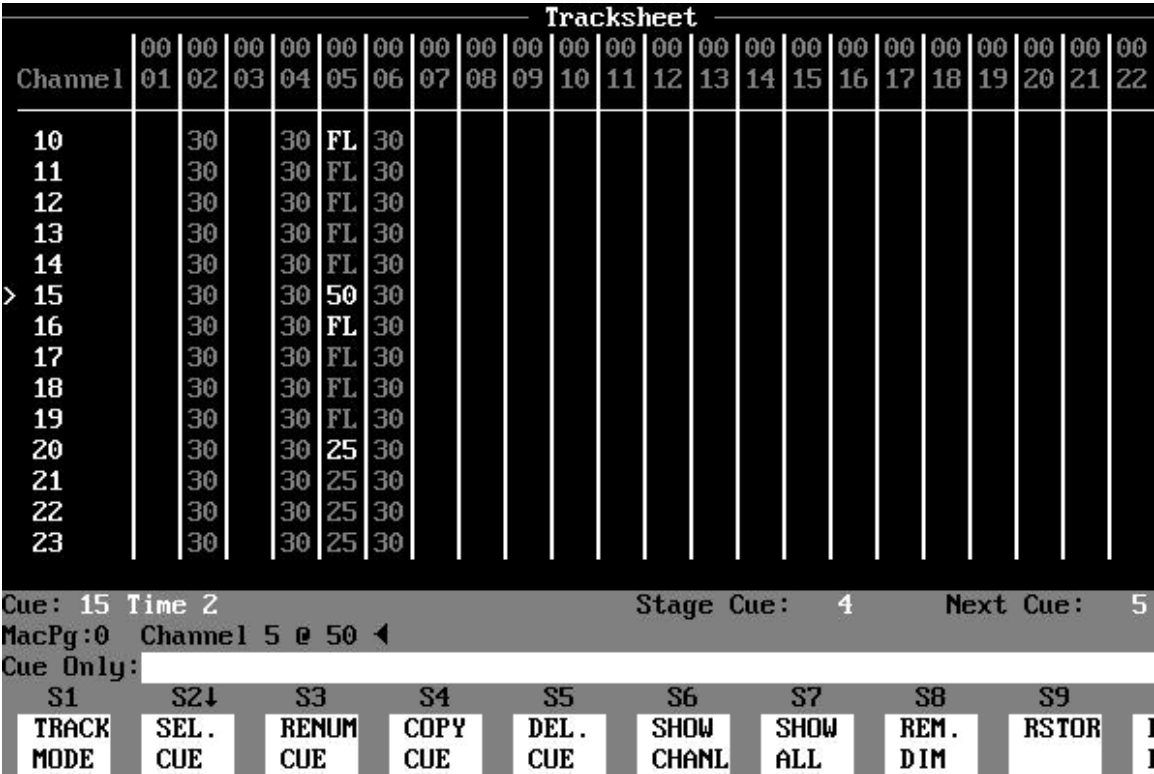


Figure 10.4.c, Editing in Cue Only Mode (after)

? **BASIC RULE:** *Blind editing of channel levels while in Cue Only mode affects levels “in that cue only”.*

Editing Existing Cue Levels in Clean Up Mode

When you operate in Clean Up mode exclusively the concept of tracking levels does not exist. Every cue is recorded as a completely different set of channels at hard/non-tracking levels. Edits made in this mode only effect the cue in which the edits are made. If tracking levels appear in the subsequent cue, they will be changed to hard levels to preserve the contents of the sequential cues.

? **BASIC RULE:** *When you edit a level in Clean Up mode, the change has no effect on levels in any other cues.*


Changing Soft Levels to Hard Levels

You can change soft levels to hard levels in any Track mode. In the Preview or Tracksheet displays, when **non-zero** tracking levels are captured, they immediately become hard/non-tracking levels. If a soft/tracking **zero** (which isn't shown on the display) is captured, it remains soft.

? **HINT:** *When you are working in the Tracksheet or Preview display, be careful with the way that you use the [ENTER] key. It will change soft levels to hard levels when you use it to capture all active channels in a cue.*

Changing Hard Levels to Soft Levels (Restoring Tracking Levels)

You can change a hard/non-tracking level to a soft/tracking level in any Track mode. This is called restoring tracking. You simply address the channel number and use the [@] and [ENTER] keys. This effectively removes the hard level and allows that channel to track the level assignment from the previous cue.



-  **EXAMPLE:** To restore tracking to a channel list in the Preview or Tracksheet display:
1. [CUE] [#] (Selects the cue to be edited.)
 2. [# list] [@] [ENTER] (Specified channels become soft levels.)

If you restore tracking to **any** channel in a Clean Up cue, the cue is no longer designated as a Clean Up cue. The Clean Up attribute is removed from the cue and it is no longer labeled in the Clean Up column in the Cuesheet and Playback displays. All other hard levels (including hard zeros) remain in the cue, so the cue will continue to work like a Clean Up cue to stop tracking.

You may find that a channel level color shows a change when the channel did not actually change levels between cues (the level value remains the same, and the color indicates a change). The wheel may have been moved unintentionally while channels were captured. When channels are active on the wheel, there is a possibility of the wheel moving just enough to change the color of the level in the display, without changing the channel level. This is because the console internally uses 256-step (8-bit) resolution for channel levels. You can eliminate this color change by resetting the level with the keypad.

Copying Cues in Different Track Modes

When you copy a cue to another location in your show, tracking levels may take on different values in the new cue location. The two things to consider are:

-  How the soft levels in the destination (new) cue will be affected by the levels of its preceding cue.
-  How the soft levels in the cue following the destination cue will be affected by the levels in the new cue. You can use different Track modes to alter the result of the copy command.

? BASIC RULE: *When copying cues, hard levels never change. If you are using Tracking mode, it is important to consider how the new cue's soft levels will be affected by the preceding cue, and how the next cue's soft levels will be affected by the new cue.*

Copying in Tracking Mode: The destination (new) cue has the same levels as the original cue for all of the **hard** levels in the original cue. All of the **soft** levels in the original cue copy to the new cue as soft levels, so they will take their values from the levels in the cue that comes before the new cue. Additionally, tracking levels in the cue that follows the destination (new) cue take on the values of the levels in the new cue.

? **BASIC RULE:** *Copying cues in Tracking mode may create a new cue that has different levels than the original cue. It may also affect tracking levels in cues that follow the new cue.*

Copying in Cue Only Mode: The destination (new) cue contains the same levels as the original cue for **all levels, hard and soft**. Soft levels become hard levels in the new cue, where necessary to maintain their same value. The cue that follows the new cue is affected similarly. Tracking soft levels become hard levels if they must do so to maintain their same level. Otherwise soft levels stay soft.

? **BASIC RULE:** *Copying cues in Cue Only mode always creates a new cue that has the same levels as in the original cue. Soft levels change to hard levels as necessary to maintain the same levels in the new cue. It does not change levels in cues that follow the new cue, except for changing soft levels to hard levels as necessary to maintain the same levels in all cues.*

Copying in Clean Up Mode: Copying cues in Clean Up mode has the same results as copying in Cue Only mode. However, the results are not visible while in Clean Up mode, because no soft levels are shown. Generally, if you are working in Clean Up mode, you are not using Tracking levels anyway, so the copying of cues always results in the exact same cue in two locations.

? **HINT:** *To maintain the same “look” of a cue copy and the next cue after the cue copy’s new location, do all Copy commands in Cue Only or Clean Up mode. Although you cannot see the tracking levels while in Clean Up mode, both modes will preserve tracking levels where they can do so (where level values do not change).*

Deleting Cues in Different Track Modes

The Delete Cue command completely removes the designated cue from your show. In all Track Modes, the contents of the cue following the deleted cue are preserved by converting all its soft levels to hard levels as necessary. This not only protects the next cue, but it also maintains the tracking pattern for the series of cues following the deleted cue.

Moving (Renumbering) Cues in Different Track Modes

The Renumber Cue command allows you to move a cue to another location in your show. When you use a Renumber command it is equivalent to deleting the source cue and creating a new cue. All of the levels and attributes of the source cue are preserved under the new cue number.

Your tracking levels may take on different values in the new cue location depending on the current Track mode when you use the Renumber command.

? **BASIC RULE:** *The Renumber command follows all the same rules as the Copy command in the way soft levels are affected by the cue's new location in your show.*

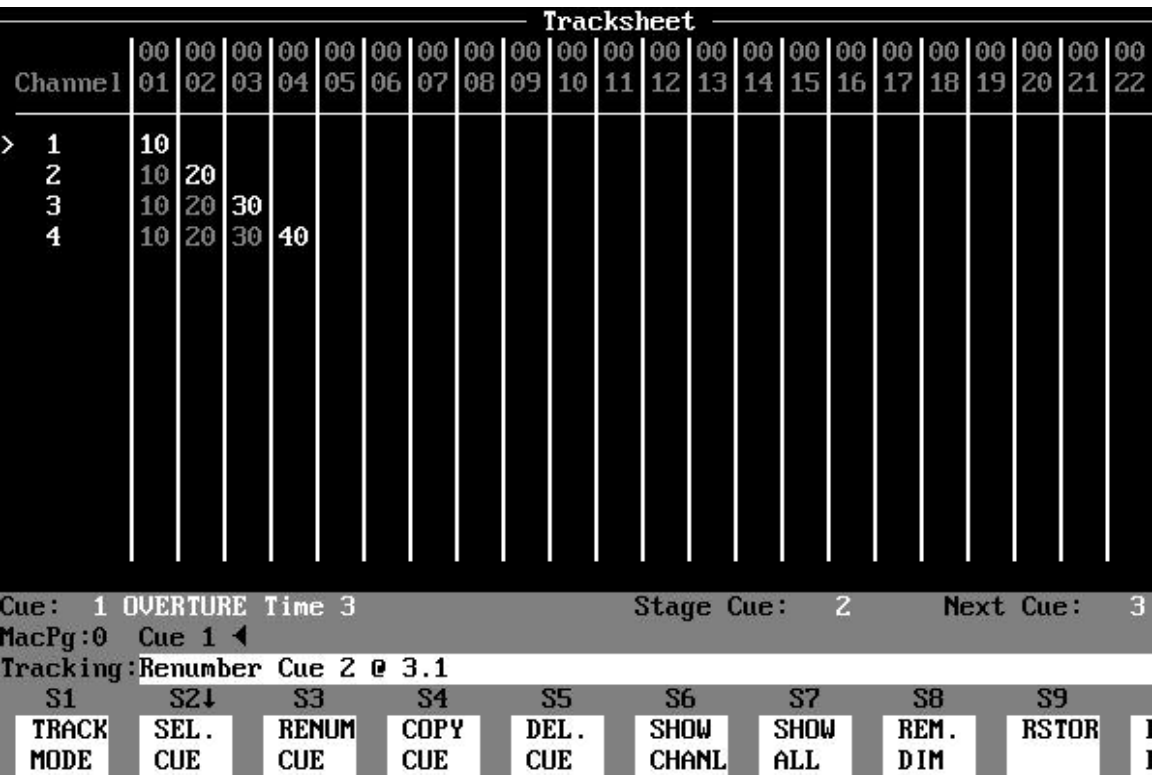


Figure 10.5.a, Renumbering Cues in Different Track Modes (before)

We will use the Tracksheet example shown in Figure 10.5.a as a starting point to show how the renumber commands differ in the different Track modes. In each example, we will renumber (move) cue 2 as cue 3.1.

Renumbering in Tracking Mode: (See Figure 10.5.b.) Every hard level from the source cue remains the same in the new cue location. Soft

tracking levels transfer to the new cue to allow hard levels to track into the new cue location.

Tracksheet																				
Channel	00 01	00 02	00 03	00 04	00 05	00 06	00 07	00 08	00 09	00 10	00 11	00 12	00 13	00 14	00 15	00 16	00 17	00 18	00 19	00 20
> 1	10																			
3	10	20	30																	
3.1	10	20	30																	
4	10	20	30	40																
Cue: 1 OVERTURE Time 3 Stage Cue: 2 Next Cu																				
MacPg:0 Renumber Cue 2 @ 3.1 ◀																				
Tracking:																				
S1	S2↓	S3	S4	S5	S6	S7	S8	S												
TRACK	SEL.	RENUM	COPY	DEL.	SHOW	SHOW	REM.	RS												
MODE	CUE	CUE	CUE	CUE	CHANL	ALL	DIM													

Figure 10.5.b, Renumbering Cues in Tracking Mode (after)

In the example above, you can see the results of cue 2 being renumbered as cue 3.1 while in Tracking mode. The results are described below:

In cue 3.1:

- ✂✂ Channel 1 remained a soft level and did not change value.
- ✂✂ Channel 2 remained a hard level at 20%.
- ✂✂ Channel 3 remained a soft level and changed value from zero to 30%.
(Don't forget-- no level shown in Tracking and Cue Only modes means a **tracking zero!**)
- ✂✂ Channel 4 remained a soft level and did not change value (stayed at zero).

In cue 4:

- ✂✂ No changes occurred (all level values are the same for cue 3.1 and cue 3), otherwise the soft levels in channels 1 - 3 would have taken on whatever new levels were in cue 3.1.

? **BASIC RULE:** *Renumbering cues in Tracking mode does not transfer soft level **values** to the new cue location. The soft levels stay soft and take on new values based on the new “previous” cue.*

Renumbering in Cue Only Mode: (See Figure 10.5.c.) All levels, hard or soft, in the renumbered cue maintain their originally assigned values when they are moved to a new location. Soft levels convert, as necessary, to hard levels to maintain their values. The cue following the renumbered cue is affected similarly. Tracking soft levels convert to hard levels, as necessary, to maintain their same level, otherwise the soft levels stay soft.

Tracksheet																						
Channel	0001	0002	0003	0004	0005	0006	0007	0008	0009	0010	0011	0012	0013	0014	0015	0016	0017	0018	0019	0020	0021	0022
> 1	10																					
3	10	20	30																			
3.1	10	20	00																			
4	10	20	30	40																		
Cue: 1 OVERTURE Time 3 Stage Cue: 2 Next Cue: 3																						
MacPg:0 Renumber Cue 2 @ 3.1 ◀																						
Cue Only:																						
S1	S2↓	S3	S4	S5	S6	S7	S8	S9														
TRACK	SEL.	RENUM	COPY	DEL.	SHOW	SHOW	REM.	RSTOR														
MODE	CUE	CUE	CUE	CUE	CHANL	ALL	DIM															

Figure 10.5.c, Renumbering Cues in Cue Only Mode (after)

In the example above, you can see the results of cue 2 being renumbered as cue 3.1 while in Cue Only mode. The results are described below:

In cue 3.1:

Channel 1 remained a soft level because it did not need to change to a hard level to keep the same value of 10%.

Channel 2 remained a hard level at 20%.

Channel 3 became a hard level because it needed to in order to maintain the same value of zero.

✍✍ Channel 4 remained a soft level because it did not need to change to a hard level to keep the same value of zero.

In cue 4:

✂✂ Channel 1 remained a soft level because it did not need to change to a hard level to keep the same value of 10%.

✂✂ Channel 2 remained a soft level because it did not need to change to a hard level to keep the same value of 20%.

✂✂ Channel 3 became a hard level because it needed to in order to maintain the same value of 30%.

✂✂ Channel 4 remained a hard level at 40%.

Renumbering in Clean Up Mode: Renumbering cues in Clean Up mode follows the same rules as in Cue Only mode. The results are not visible while in Clean Up mode since no soft tracking levels are shown. The “hidden” soft levels are converted to hard levels, as necessary, in the renumbered cue and in the cue that follows the renumbered cue to maintain their assigned level values.

? **HINT:** *To maintain the same “look” of a renumbered cue and the next cue after the cue’s new location, do all Renumber commands in Cue Only or Clean Up mode. Although you cannot see the tracking levels while in Clean Up mode, both modes will preserve tracking levels where they can do so (where level values do not change).*

CHAPTER 11:

Names

Naming is a very useful feature available to you in the Encore consoles. Cues, groups, effects, submasters, shows and disk files can be assigned names. The submaster Bump buttons are able to act as alphabet characters (letter keys) in order to spell out the desired name labels. You can assign names to items by selecting the appropriate Name soft key, and then using the Bump buttons as letter keys to spell out the desired name. All names can be up to 16 characters long, except for disk file names which can be up to 8 characters in length. The Reference by Name feature in the Setup display allows any named item to be addressed by its assigned name as well as its number.

Bump Button	Alpha Character	Bump Button	Alpha Character	Bump Button	Alpha Character	Bump Button	Alpha Character
1	A	13	M	25	Y	37	?
2	B	14	N	26	Z	38	/
3	C	15	O	27	!	39	=
4	D	16	P	28	"	40	~
5	E	17	Q	29	#	41	:
6	F	18	R	30	\$	42	;
7	G	19	S	31	%	43	,
8	H	20	T	32	&	44	(space)
9	I	21	U	33	'	45	(space)
0	J	22	V	34)	46	(space)
11	K	23	W	35)	47	(space)
12	L	24	X	36	*	48	(space)

Table 11.1, Alpha Character to Bump Button Assignment

Alpha Mode

In Alpha mode, each Bump button represents a letter of the alphabet instead of a submaster number.

Any time the green word "ALPHA" is flashing at the right edge of the Status Bar, the submaster Bump buttons are in Alpha mode, and can only be used for constructing names, not for submaster functions. The Bump buttons go into Alpha mode when you press any naming soft key. Once the naming command is executed with the [ENTER] key, the Bump buttons are again available for submaster functions.


The Reference By Name feature in System Setup (when enabled) allows the Encore console to recognize cues, groups, etc. by their names as well as by their numbers. If cue 1 has been assigned the name "Preset," you can actually use the command [GO TO CUE] [P] [R] [E] [S] [E] [T] [ENTER] to go to cue 1.

When you have enabled the Reference by Name feature in the Setup display, the [RECORD CUE], [CUE], [GROUP], [SUB], [EFFECT] and [GO TO CUE] keys all cause the Bump buttons to enter Alpha mode.


Cue, Effect, Group, and Submaster Names

You can assign names up to 16 characters in length to cues, effects, groups and submasters. These names can be exclusively numbers, exclusively letters (via submaster Bump buttons) or a combination of letters and numbers. In the Encore 48/96 and XL models, punctuation symbols, etc. are available on Bump buttons 27 - 43.


Cue names often describe the action on stage to signal the point at which that cue should begin. A cue named "Faust Down Right" may tell the stage manager to call that cue, or may tell the board operator to push the GO button when Faust reaches his downstage right position. A cue may be named in any display where cues may be addressed.

 **EXAMPLE:** To name a cue in the Stage, Preview, Cuesheet, Tracksheet or Playback displays:
[CUE] [#] (NAME CUE) [enter name] [ENTER]
- or -
[RECORD CUE] [#] [TIME] etc. (NAME CUE) [enter name]
[ENTER]

You can use the (NAME EFFECT) soft key in the Effect display to assign a name to the current effect. Effect names often describe their action, placement in the show, or possibly their location. An effect might be called "Proscenium Chase" or "Act 2 Fire."

 **EXAMPLE:** To name an effect in the Effect display:
1. (SEL FX) [#] [ENTER]
2. (FX UTIL.)
3. (NAME FX) [enter name] [ENTER]

You can use the (NAME GROUP) soft key in the Group display to assign a name to the current group. Group names often refer to a location on stage, placement in the show or a description of the "look". A group may be called "DR Bench Evening" or "Warm Cyc Tone."

 **EXAMPLE:** To name a group in the Group display:
1. (SEL GROUP) [#] [ENTER]

2. (NAME GROUP) [enter name] [ENTER]

You can use the (NAME SUB) soft key in the Submaster display to assign a name to a submaster. This can be especially useful to help clarify "at a glance" a submaster type and function. An Effect sub name can describe the action of the effect, "Act3 Window Glow". An Inhibitive sub name can describe what type of channels are being inhibited such as "Inhib Audience" or "Inhib Wk Lights." A timed submaster, Bump button settings or descriptions of "looks" can all be identified quickly by the submaster name.



EXAMPLE: To name a submaster in the Submaster display:

1. (SEL SUB) [#] [ENTER]
2. (SUB TYPE)
3. (NAME SUB) [enter name]

Show and Disk File Names

You can name your show in the Setup display by using the (NAME SHOW) soft key which is available under the (SYSTM SETUP) soft key. A show name may be up to 16 characters in length. The show name may also consist of a combination of letters and numbers. It is important to remember that a show name is different from a disk file name. The show name labels the show as seen in the Setup display. The show name, as well as the names of any cues, groups etc. appear when show information is printed.

A disk file name is the label the show is given on your disk. Often the disk file name is the same as the show name. The disk file name can be a combination of letters and numbers up to eight characters in length, which sometimes doesn't permit a show name and disk file name to be the same.

A file name is assigned to the show when you use the (REC. DISK) soft key in any display. Once (REC. DISK) is pressed, the command line reads "Record to Disk as File". At this point, enter your file name using the Data Entry Keypad and the Bump buttons, and then press the [ENTER] key. If you do not specify a name, the console records your show to disk as the default file, which is the current File Name shown in the Setup display. If you have not yet recorded a new show to disk, or did not originally retrieve the show from disk, no current File Name is shown in the Setup display. If you record a "new" show to disk without specifying a name the default file name will be "1".

There are certain characters which are not allowed to be used as part of a disk file name, such as a [.] or a space. These symbols have a specific meaning in the computer language of the console and disk drive (the PC DOS language).



EXAMPLE: To assign a file name to a show when recording the show to disk:

1. (REC. DISK)
2. Enter show name, up to 8 characters.
3. [ENTER] (The assigned disk file name appears in the Setup display in the File Name field.)



NOTE: When a file is written to disk, the console automatically assigns the “.ENC” file name extension, signifying that the file is an Encore show file. When you are working with files in the console, you do not need to specify the “.ENC” file name extension.

Reference By Name

You can use the Reference By Name soft key in the Setup display to allow reference to cues, groups, subs, and effects by their names, as well as by their numbers. In order to use item names in playback and editing commands, you must first press the (REF BY NAME) soft key in the Setup display to enable the Reference By Name feature. Press the (REF BY NAME) soft key again to disable the feature. By disabling the Reference By Name feature, you can prevent your Bump buttons from going into Alpha mode when other keys are pressed ([SUB], [GROUP], etc.).



EXAMPLE: To enable the Reference By Name feature from the Setup display:

1. (SYSTM SETUP)
2. (REF BY NAME) (Pressing [ENTER] is not necessary.)

When you refer to items by name instead of by number, you do not have to use the entire name. For example, if you have a group named "FRONTBLUE", you can address it in a command by using the keystrokes [GROUP] [F][R][O][N][T], or even [GROUP] [F].

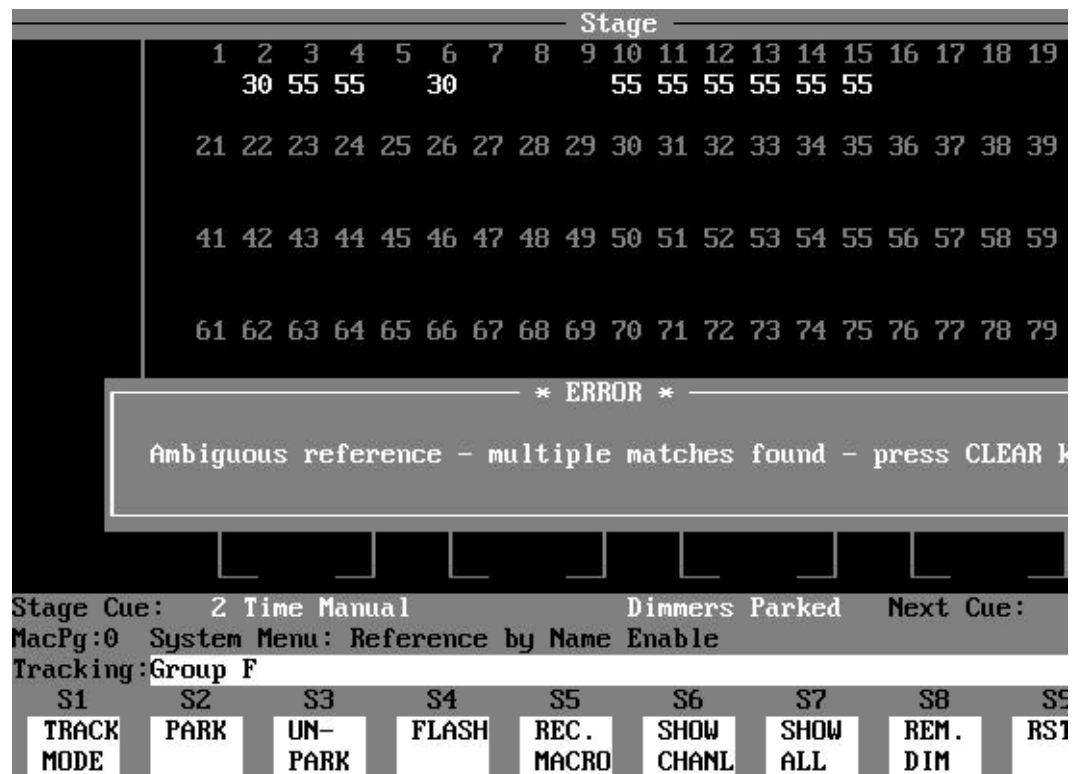


Figure 11.1, Ambiguous Reference Error Message

However, if you also have a group named "FRONTRED", then you must specify enough letters to distinguish between the two group names. In this case, using the reference [GROUP] [F][R][O][N][T] would result in an error message stating that you have made an ambiguous reference. (See Figure 11.1). You must specify at least [GROUP] [F][R][O][N][T][B] to distinguish between these two groups.

CHAPTER 12:

Utilities, Warnings, Printing, and Default Settings

Help Utility

The Help feature is a quick and easy way to find answers to questions about any Encore function, feature, hard key, or soft key. The information available online in the Help feature is basically the same information that is found in the Reference Section of this manual. The Help feature is meant to provide you with a quick answer to a question, along with an example of a command. If you can't find the answer to your question in the Help feature, please consult the User's Guide.

A Master Help Disk either came originally with your console, or came with a software upgrade for version 3.05 (or later). The Help information is stored in a Help file named "ENCORE.HLP" on the Master Help Disk. In order for the Help feature to function, a disk containing the Help file must be in the disk drive. You can place the Master Help Disk in the disk drive when you want to use the Help feature, or you can copy the Help file to other high-density 1.44MB disks that you use for show storage, using any IBM-compatible computer.

? **HINT:** *Copy the Help file to your show storage disks before you start working on your show. This will allow you to avoid the need to change disks between a Help disk and a show storage disk while you are working.*

There are different methods for using the Help feature. It was designed with these different methods so that you are likely to get the correct information by trying what you think will work (and it probably will):

☞☞ You can press the [HELP] key anytime that you have a keystroke entered on the command line in order to see information about that key's function. This will display the topic for the last keystroke entered on the command line that has a topic.

☞☞ If you press the [HELP] key while the command line is empty, you will see the Main Topic Menu. Use the "arrow" keys to select a topic for viewing, and press [ENTER] to see the information under that topic. Note that all the different soft key topics are located in a sub-menu under the topic called "Soft Keys".

☞☞ Anytime the Main Topic Menu is displayed, you can press any key, hard or soft, to see the topic for that key.



EXAMPLE: To use the Help feature (with a disk containing the Help file already in the disk drive):

1. Select the key about which you seek information, so it shows on the command line. This sometimes requires other keypresses first (e.g. for cue attributes like Link Reps, Fade Effects, etc.).
2. [HELP]
- or -
 1. [HELP]
 2. Use the arrow keys to select a topic.
 3. [ENTER]
- or -
 1. [HELP]
 2. When the Main Topic Menu appears, press any hard or soft key for information about that key.

When you are viewing a Help topic, you can use the Up and Down Arrows, and the [PAGE UP] and [PAGE DOWN] keys to scroll the information shown in the display. Pressing the Right or Left Arrow keys displays the following or previous topic from the topic list.

There is a list of Related Topics at the end of each Help topic. The first Related Topic is shown in a gray background to indicate that if you press [ENTER] you will see that topic. You can use the [LAST] and [NEXT] keys to select a different Related Topic that you wish to view, then press [ENTER]. Anytime that you are viewing a Help topic, you can always return to the Main Topic Menu by simply pressing [HELP].

Flash Command Utility

The (FLASH) soft key allows you to immediately locate lights controlled by designated channels by alternately switching their stage level between zero and Full. You can use the (FLASH) soft key in the Stage display to flash selected channels on stage. Any channels may be selected with the flash command.

To stop the Flash command press the [CLEAR] key, execute a new command, or select a new display.



EXAMPLE: To flash channel 2:
(FLASH) [2] [ENTER]

Dimmer Check Utility

The Dimmer Check utility lets you test the output of individual dimmers. To start a dimmer check in the Stage display, set an individual dimmer to a level using the [DIMMER] hard key on the Data Entry Keypad. The Direct Dimmer Control window appears in the lower left corner of the display. Use the [NEXT] and [LAST] keys to step through the dimmers sequentially. The output level of the dimmer you are currently testing is always under control of the wheel.

To release Direct Dimmer Control from the wheel, press the [CLEAR] key, select a new command, or press a display key.



EXAMPLE: To select Direct Dimmer Control in the Stage or Playback display:

1. [DIMMER] [#] [@] [level] [ENTER]
2. Adjust level with the wheel.
3. [NEXT] or [LAST]
4. [CLEAR] (Dismisses Direct Dimmer Control window.)

A dimmer check can also be executed using the same method on the Encore's optional Hand Held Remote.

Channel Check Utility


When you have set a single channel at a level in the Stage display, you can use the [NEXT] and [LAST] keys to select different channels sequentially. This allows you to run through a channel check by pressing the [NEXT] key repeatedly. The channel you are checking is shown in reverse video, and is always under wheel control.



- EXAMPLE:** To run a channel check in the Stage or Playback display:
1. [channel #] [ENTER] (Use the wheel to set the level.)
- or -
[#] [@] [level] [ENTER]
 2. [NEXT] or [LAST], etc.

Cue Check Utility

You can quickly test the output for each cue by running the Cue Check utility, which is similar to the Dimmer and Channel Check utilities. While you are in any cue in any display, press the [GO TO CUE] key. "Go To Cue" appears in the Command Line awaiting a specific cue number. Instead of completing the command, press the [NEXT] or [LAST] key to step through the cues sequentially. Each cue fades in the two second default time, to help reduce the shock, and thereby prolong the life of your lamps.

-  **EXAMPLE:** To run a cue check in the Stage or Playback display:
1.

[GO TO CUE]
2.

[NEXT] or [LAST], etc.

Warnings and Error Messages

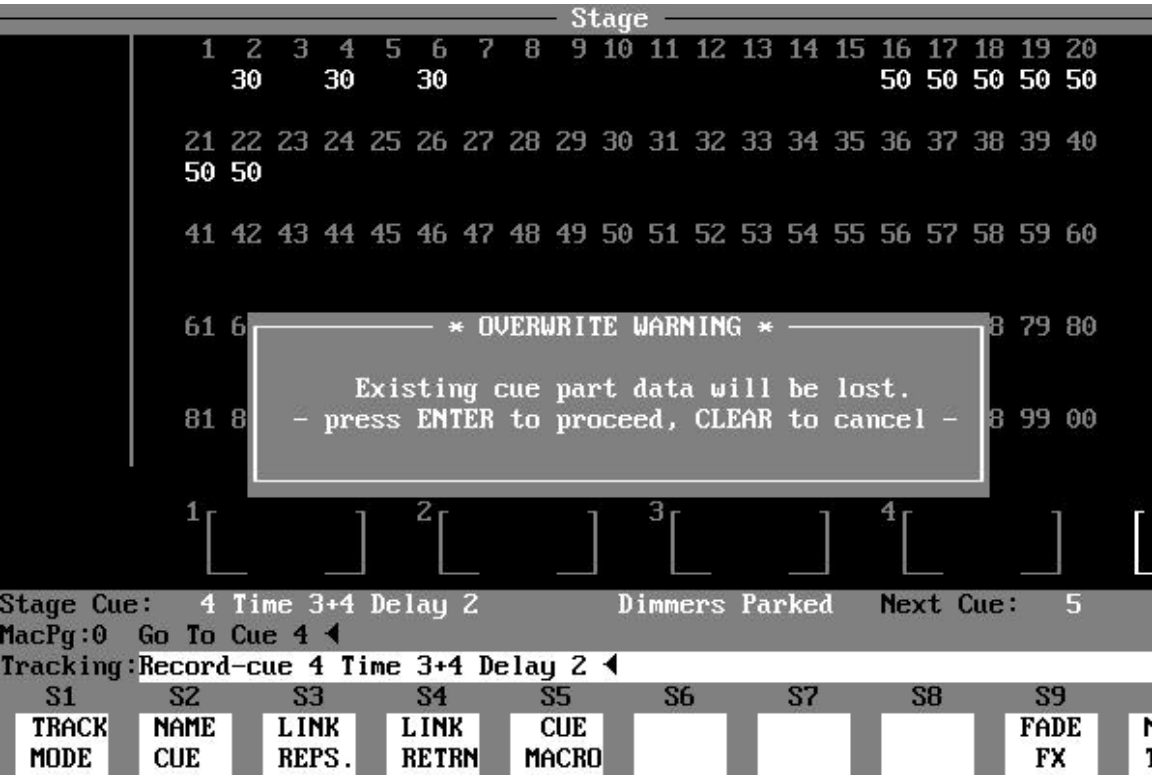


Figure 12.1, Overwrite Warning Message.

Overwrite Warning: The Overwrite Warning message alerts you to the fact that the command that you entered will overwrite information that already exists in console memory. The command will delete the previous information from the console memory and replace it with the newly created information. To cancel the overwrite, press the [CLEAR] key. To continue the command, press [ENTER].

The Overwrite Warning message occurs with the following command types, when the current command would cause pre-existing data to be destroyed:

- ✂ **Record** commands
- ✂ **Copy** commands
- ✂ **Renumber** commands
- ✂ **Retrieve** commands

Error Messages: A red Error Box containing an error message appears on the display when the command entered cannot be performed. Usually, this type of error occurs when a wrong key or wrong command has been entered. In all cases, the command entered cannot be executed as specified until you correct the problem indicated in the Error Box. The following actions cause an Error Box to appear:

- ✂ Command syntax errors (wrong keystrokes)
- ✂ Range errors (see next topic)
- ✂ Cross patching errors (patching a dimmer to more than one channel)

Press [CLEAR] to dismiss an Error box.

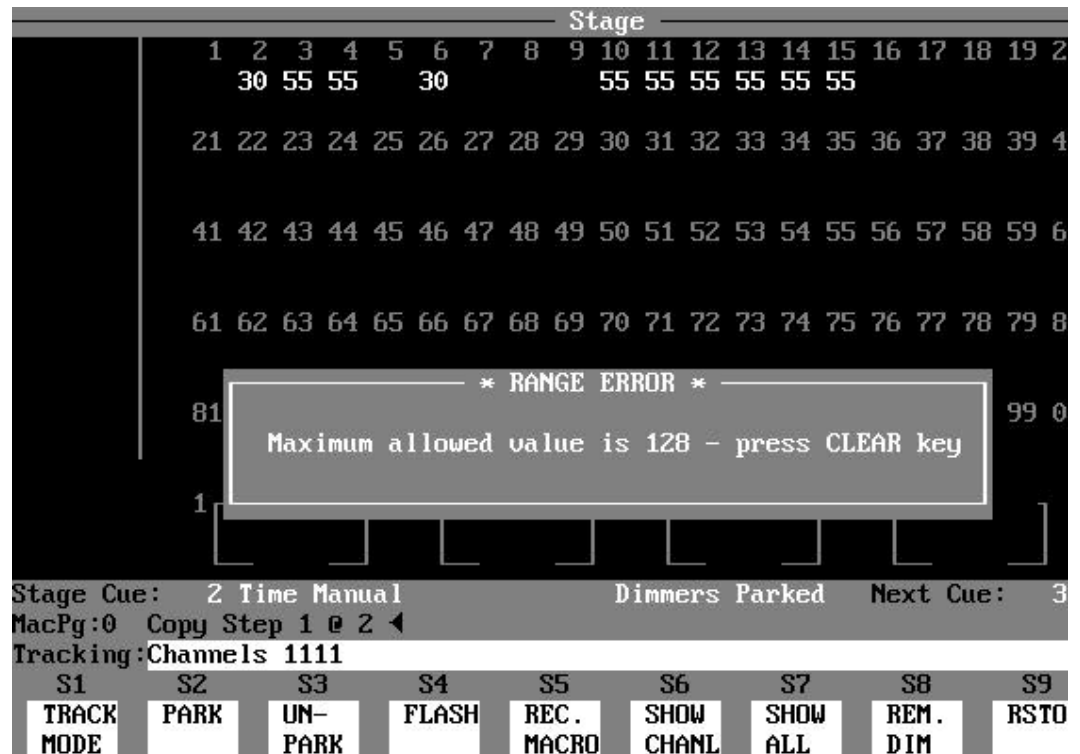







Figure 12.2, Range Error Message

Range Error Message: A red Range Error message appears when the number entered is outside the range of values available for that item. The range limit is shown within the Range Error Box.

 **EXAMPLE:** If you try to select an effect number greater than 99, a Range Error message appears because the console has a maximum of 99 effects:

1. [EFFECT]
2. (SEL. FX) [100] (Range Error message appears immediately, before you press [ENTER].)

Disk I/O Error Message: A Disk I/O Error message appears whenever your requested disk function cannot be completed successfully. This message indicates a problem with the disk drive or the floppy disk itself. Some common conditions that cause the Disk I/O Error message are:

-  No disk is in the drive when you enter a disk function command.
-  Attempting to record to a write-protected disk.
-  Attempting to use an unformatted disk, or a disk formatted in other than 1.44MB High Density.
-  Attempting to use a damaged disk.

Record Disk Warning: An Overwrite Warning message appears whenever you re-record a show onto floppy disk. This warning indicates that the previous file on disk (with the same disk file name) will be replaced with the current show in console memory.

Printers

The Encore line of consoles is designed to be compatible with printers that support the IBM® character graphics set. The console sends a transmission to print 62 lines per page, followed by a form feed. The Encore line is compatible with the FX and LX line of Epson® dot-matrix printers, or with any printer that supports emulation of Epson FX or LX printers. If you want to use a laser printer, you must configure that printer to the proper emulation mode. Consult the owners manual of your printer for more information.

Printing

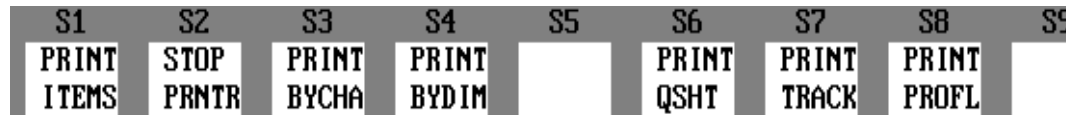


Figure 12.3, Print Options Soft Keys

You can perform all printing commands through the Setup display. You can print all of the show, or print only specific portions. You can use the following Print Options soft keys to print its corresponding show data:

(PRINT BYCHA)	= Prints entire Patch: By Channel table.
(PRINT BYDIM)	= Prints entire Patch: By Dimmer table.
(PRINT QSHT)	= Prints entire Cuesheet .
(PRINT TRACK)	= Prints entire Tracksheet .
(PRINT PROFL)	= Prints all Profiles .




Figure 12.3, Print Items Soft Keys


Press the (PRINT ITEMS) soft key to reveal the soft keys that print the following:


(PRINT CUE)	= Prints cues .
(PRINT FX)	= Prints effects .
(PRINT GROUP)	= Prints groups .
(PRINT MACRO)	= Prints macros .
(PRINT SUB)	= Prints submasters .
(PRINT NONDM)	= Prints all non-dim dimmer assignments .
(PRINT PARK)	= Prints all Parked dimmer assignments .
(PRINT ALL)	= Prints all show data .

NOTE: *Printing all the show data with the (PRINT ALL) key takes a long time (and a lot of paper).*

Filtered Range: Some print commands allow you to print a specified range of items, referred to as a "filtered" range. The word "Filtered" in bold at the bottom of a printout indicates that additional items of that category are not included in the printout. For example, you can use the Print Cue command with a list to indicate which cues to print.









-  **EXAMPLE:** To print a range of cues:
1. (PRINT OPTNS)
 2. (PRINT ITEMS)
 3. (PRINT CUES) [#] [>] [#] [ENTER]

-  **EXAMPLE:** To print all cues, do not specify a range:
1. (PRINT OPTNS)
 2. (PRINT ITEMS)
 3. (PRINT CUES) [ENTER]

 **NOTE:** Cues are always printed as they appear in the Preview display.

Printing Limited Channels: You can print only the channels that you wish to see by selecting display formatting prior to any printing commands. Use the (SHOW CHANL) soft key to format the display to the channels that you want in your printout.

The word "Filtered" in bold at the bottom of each page of a printout is called the Filtered Flag. The Filtered Flag appears if display formatting was in place when the print command is executed, indicating some channels are not shown in the printout. The following print command soft keys are affected by the current display formatting:

-   (PRINT CUE)
-   (PRINT GROUP)
-   (PRINT SUB)
-   (PRINT TRACK)

CHAPTER 13:

Memory

Console Memory vs. Floppy Disk Storage

When you record information (such as a cue in the Stage display or edits made in the Preview display) the information is saved in the console's RAM (Random Access Memory). All information remains in memory when the console is turned off because the RAM has a battery to keep the memory active.



ADVANCED TOPIC: For more information on the battery, see Appendix A, *Maintenance And Customer Service*.

When you record a show to floppy disk, it is stored on the disk for reloading into the console at a later time. It is always a good idea to keep your show stored on floppy disk as a backup to what is stored in the console RAM.



HINT: *Save your show to floppy disk often as you build it. As you invest more time in creating a show it is a good idea to make two or more copies on separate disks as “safety” backups.*

Memory Test











You can perform a test of the Random Access Memory (RAM) in the console by using the (TEST MEM) soft key, under the (MEMORY OPTNS) soft key in the Setup display. **This test will destroy all show information in memory**, so you should save your show to disk before performing a memory test.




ADVANCED TOPIC: For more information about running the Memory Test, see Appendix A, *Maintenance and Customer Service*.

Clearing Memory


You can use the Clear soft keys under the (MEMORY OPTNS) soft key in the Setup display to clear selected items, or clear all items from the show currently in memory. These Clear soft keys are listed as follows:

 (CLEAR ALL)	=	Clears all items in current show.
 (CLEAR -PATCH)	=	Clears all items, but saves patch .
 (CLEAR ITEMS)	=	Clears selected items . Reveals another level of soft keys.
 (CLEAR CUES)	=	Clears selected cues from current show.
 (CLEAR FX)	=	Clears selected effects from current show.
 (CLEAR GROUP)	=	Clears selected groups from current show.
 (CLEAR MACRO)	=	Clears selected macros from current show.
 (CLEAR PATCH)	=	Clears the entire patch table from current show.
 (CLEAR PROFL)	=	Clears selected profiles from current show.
 (CLEAR SUBS)	=	Clears selected submasters from current show.

An item list must be specified when clearing cues, effects, groups, macros, profiles, and submasters, or else all of the item type will be overwritten. An Overwrite Warning appears that lists the total number of items that will be lost. If no item list is specified, then all of the item type will be cleared from memory.


 **EXAMPLE:** To clear a selected list of groups from memory:

1. (CLEAR GROUP) [# list] [ENTER] (Overwrite Warning message appears.)
2. [ENTER]

 **EXAMPLE:** To clear all of the groups from memory:

1. (CLEAR GROUP) [ENTER] (Overwrite Warning message appears.)
2. [ENTER]

Track Modes: In all Track modes, the cue following the cleared cues will be assigned hard levels as necessary so that it contains the same channels and levels as it did before the preceding cues were cleared.

 **EXAMPLE:** If in cue 1 channel 4 has a hard level at 50% that tracks into cue 2, and cue 1 is deleted, then cue 2 will be modified to contain a hard level at 50% for channel 4.

Performing a “Hard Clear”

You can clear all memory in the console and reset the main processor in the console by performing what is called a “Hard Clear”. This totally clears anything that has been stored in RAM. No show information will remain in memory after you perform a Hard Clear. The System Settings will be reset to their default settings as shown in Table 13.1 (see next topic). If the console has experienced a power surge or other anomaly that you think may have caused your console to malfunction, it is recommended that you perform a Hard Clear.



EXAMPLE: To perform a Hard Clear:

1. Save your show to disk if you wish to save the show information. This procedure will erase all information in the console RAM.
2. Hold down the [CLEAR] key. **Keep it held down until this procedure is complete.**
3. While continuing to hold down the [CLEAR] key, turn the keyswitch to OFF.
4. Wait approximately five seconds.
5. Turn the keyswitch to ON.
6. Wait for the display to fully reappear on the monitor.
7. Release the [CLEAR] key.



NOTE: *If you think the show has been corrupted as a result of a malfunction, the disk file may also be corrupted when you save it. If you have an earlier version of the show already saved on disk, it would be preferable to retain that earlier file than to overwrite it and risk corrupting your only good copy. If you have made any edits since that earlier version, you can save the new “suspected corrupted” version as a different file name, and attempt to use it after the Hard Clear.*

System Settings in Memory


Some of the system settings from the Setup display are stored as part of the show file when you record to disk. Other settings may not be recorded to disk, but are kept in a separate part of the console memory that is not affected when a new file is loaded into the console. If you clear memory with the (CLEAR ALL) soft key, all system settings remain the same (except the Show File and the Show Name). If you perform a “Hard Clear”, all settings except the dimmer protocol are reset to their default settings. The dimmer protocol setting always remains the same, unless the console battery is dead. The table on the following page shows the system settings and how they are affected by loading a show from disk:

System Setting	Stored on Disk as Part of Show File	Default Setting
Unused Cues/Groups	yes	maximum
Unused Effects	yes	maximum
Playback Cue Rows	yes	12
Number of Channels	yes	maximum
Number of Dimmers	yes	maximum
Show Name	yes	none
File Name	yes	none
Dimmer Protocol	no	either
Sub Level Window	no	Expanded
Fader Clear Mode	yes	Automatic
MIDI Control On/Off	no	either
MIDI Device #	yes	#1
Reference By Name	yes	Off
Hand Held Remote On/Off	no	Off

Table 13.1 System Settings in Memory

Recording to a Floppy Disk

The Encore uses **only** 3½" double-sided HD (High Density) 1.44MB disks formatted for IBM[®] compatible PCs. The disk drive is located below the front edge of the console. Use the write protect tab on the floppy disk when you want to protect the contents of the floppy disk from being erased or overwritten.

 **EXAMPLE:** To record an entire show to a floppy disk, from most displays:

(REC. DISK) [ENTER] (Defaults to currently loaded file name, or "1.ENC".)
 - or -
 (REC. DISK) [enter file name] [ENTER] (Enter up to 8 character file name.)

An eight character show file name may be specified when using the Record Disk command. You can use the Bump buttons for alpha characters, and use the keys for numerals in file names. If no name is specified, the default file name is the name of the file currently loaded in the console. If the file has not been recorded before, the default file name is "1.ENC". ("1" is the default file name, and ".ENC" is the file name extension added by the console.)


Overwrite Warning Message: Multiple shows may be recorded to a floppy disk. When a show file on the disk already has the same file name as the show you are trying to record, an Overwrite Warning message appears. Press the [ENTER] key to complete the command and replace the pre-existing show file, or press the [CLEAR] key to cancel the command. If the show file name to be recorded is a new name, no files on the disk will be overwritten.

Use the (DISK FILES) soft key in the Setup display under the (MEMRY OPTNS) soft key to invoke the Disk File Management display, which lists all files currently on disk.


Retrieving from a Floppy Disk

To retrieve a show file from a disk and load it into the console RAM, use the (RETRV FILE) soft key in the Setup display with the name of the desired file. You can use up to 8 characters in the show file name to specify the file on disk to be retrieved. If no name is specified when using (RETRV FILE) in the Setup display, the console attempts to retrieve the current show file name, or file "1.ENC". If no name is specified when using (RTRV FILE) in the Disk File Management subdisplay, then the file shown in reverse video becomes the default file retrieved.

Overwrite Warning Message: An Overwrite Warning message announces that the current show in memory will be replaced by the show data being retrieved. Pressing the [ENTER] key will complete the command and replace any pre-existing show data in RAM. Pressing the [CLEAR] key will cancel the command.

 **EXAMPLE:** To retrieve an entire show from a disk (and replace show data currently in memory) from the Setup display:

1. (MEMRY OPTNS)
 2. (DISK FILES) (Opens the Disk File Management subdisplay.)
 3. [NEXT] or [LAST] (Selects the "current" Show File.)
 4. (RETRV FILE) [ENTER] (Retrieves file shown in reverse video.)
- or -
- (RETRV FILE) [enter file name] [ENTER] (Retrieves specified file.)

 **EXAMPLE:** To retrieve a show from disk, yet retain the current patch:

1. (MEMRY OPTNS)
 2. (DISK FILES) (Opens the Disk File Management subdisplay.)
 3. (RETRV -PATCH) [ENTER] (Retrieves file shown in reverse video **minus** the patch information.)
- or -
- (RETRV -PATCH) [enter file name] [ENTER] (Retrieves specified file without the patch information.)

Disk File Management Subdisplay

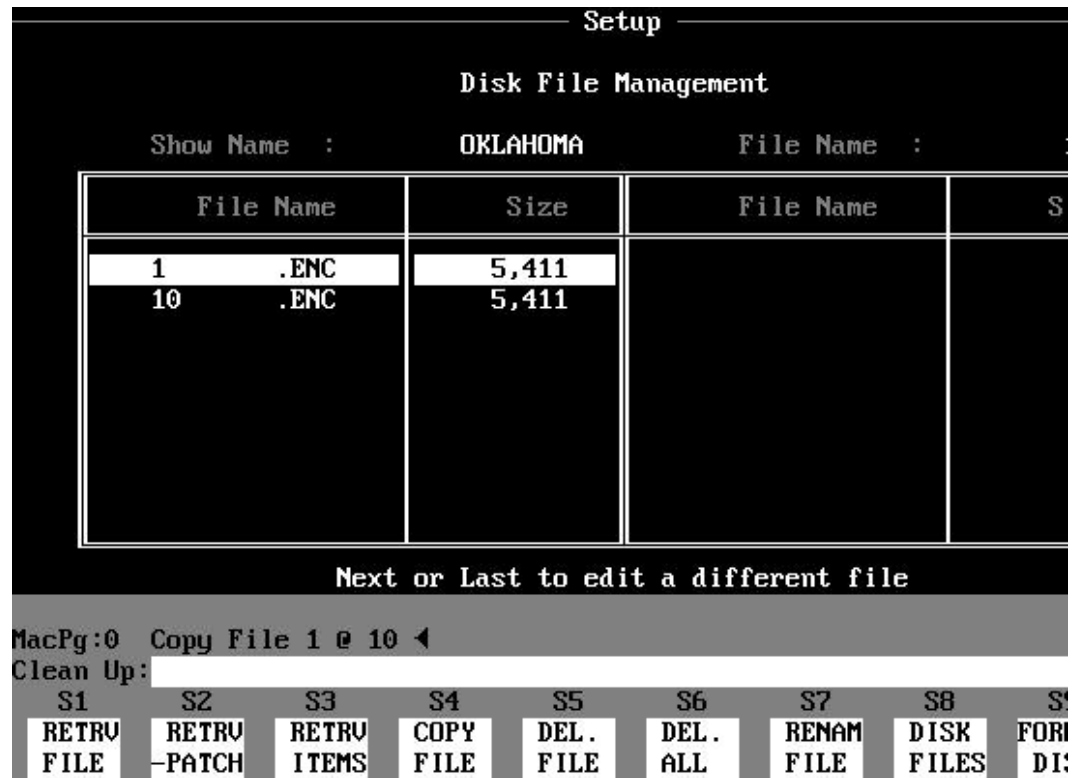








Figure 13.1, Disk File Management Subdisplay

You can use the (DISK FILES) soft key to open the Disk File Management subdisplay, which is a list of all the show files and other files on the floppy disk in the console. The (DISK FILES) soft key is available under the (MEMORY OPTNS) soft key in the Setup display.


When you press the (DISK FILES) soft key, the floppy disk in the drive is read, and all show file names are shown in a table (along with all other files on the disk). The size of each file in bytes is displayed to the right of its name. The first show file in the list appears in reverse video. Use the [NEXT] and [LAST] keys to select a different show.


You must highlight a file name in reverse video or specify a file name in the Command Line, before you can manipulate the file. You can use commands in the Disk File Management subdisplay to manipulate the show files on the floppy disk through the following soft keys:

- (RETRV FILE) = **Retrieve file** from floppy disk.
 - (RETRV -PATCH) = **Retrieve file minus patch** from disk.
 - (RETRV ITEMS) = **Retrieve specific items:** cues, effects, subs, etc.
 - (COPY FILE) = **Copy show file** to another show file name.
- (Reveals another level of soft keys.)

 (DEL. FILE)	= Delete indicated file from floppy disk. .
 (DEL. ALL)	= Delete all files from the floppy disk. .
 (RENAM FILE)	= Rename the current or indicated disk file. .
 (DISK FILES)	= Read files on new disk loaded in console (updates display.)
 (FORMAT DISK)	= Format a new disk.
 (REC DISK)	= Record selected file , either under a new name, or record over an existing file if no new name is specified.
..	


Copy Examples:


 **EXAMPLE:** To copy the contents of the selected show file into show file "CABARET":
(COPY FILE)[CABARET] [ENTER]

 **EXAMPLE:** To copy the contents of the show "CABARET" into show "CABARET2":


1. (COPY FILE)
2. [CLEAR] [CLEAR] etc. (Clears default name in Command Line.)
3. [CABARET] [@] [CABARET2] [ENTER] (Copies file "CABARET" to file "CABARET2")

Delete Examples:

 **EXAMPLE:** To delete the current disk file:
(DEL. FILE) [ENTER]

 **EXAMPLE:** To delete disk file "CABARET":
(DEL. FILE) [CABARET] [ENTER]

Rename Examples:

 **EXAMPLE:** To rename the current disk file to file "CABARET2":
(RENAM FILE) [CABARET2] [ENTER]



EXAMPLE: To rename the disk file "CABARET" to file "OLD1":

1. (RENAM FILE)
2. [CLEAR] [CLEAR] etc. (Clears default name.)
3. [CABARET] [@] [OLD1] [ENTER]



NOTE: *If the new file name already exists the following message appears on the screen:*










* OVERWRITE WARNING *

File # already exists.

- press ENTER to proceed, CLEAR to cancel -

Selectively Retrieving From Floppy Disk

Use the (RETRV ITEMS) soft key to retrieve selected items from the currently selected show file on the floppy disk. The (RETRV ITEMS) soft key is available in the Setup display, under the Disk File Management subdisplay. Use the [NEXT] and [LAST] keys to select different show files. Press the (RETRV ITEMS) soft key to reveal another level of soft keys listed as follows:

- | | |
|---|---|
|  (TRACK MODE) |  (RETRV PATCH) |
|  (RETRV CUES) |  (RETRV SUBS) |
|  (RETRV FX) |  (RETRV PROFL) |
|  (RETRV GROUP) |  (RENUM AS) |
|  (RETRV MACRO) | |

You can specify a list as part of the above commands, indicating which numbered items (of the same type) are to be retrieved. If no list is specified, all items of that type are retrieved.



EXAMPLE: To retrieve specified cues:
(RETRV CUES) [# list] [ENTER]



NOTE: *Retrieved items will replace items in console memory that already have the same number. An Overwrite Warning message box requests confirmation with a second press of the [ENTER] key. The selected Track mode affects cue retrievals in the current show in the same way that inserting a cue in an existing cue list would be affected by the different Track modes.*



ADVANCED TOPIC: See Moving Cues In Different Track Modes topic in Chapter 10, *Editing Cues and Using Track Modes*.

You can use the (RENUM AS) soft key with some retrieve commands to change the numbers in a list of the items being retrieved. This allows you to avoid overwriting pre-existing items in memory. The number specified in the Command Line is assigned to the first item retrieved. All other items retrieved as a part of the same command are numbered respectively. Any “gaps” in the item numbering on disk are also reflected in the numbering of the retrieved items.



EXAMPLE: Let’s say show 1 is currently in the console and has cues 1 - 100. Show 2 on disk also has cues 1 - 100. To retrieve specified cues and renumber them, in the Disk File Management subdisplay:

1. [NEXT] or [LAST] (Highlight show 2 in reverse video as the default show.)
2. (RETRV CUES) [1] [>] [100] (RENUM AS) [201] [ENTER]
(Cues 1 - 100 are copied from show 2 into show 1, and renumbered as cues 201 - 300.)

Upgrading Software

The Encore console has the ability to have new versions of software loaded into it from floppy disk, like upgrading software on a personal computer. The disk must be an Encore Operating System disk in order for the procedure to function correctly. Your console was shipped with an Operating System disk that has a copy of the original software version that was loaded in it when it was tested at the factory.



ADVANCED TOPIC: For complete information about performing a software upgrade, see Appendix A, *Maintenance and Customer Service*.

ENCORE USER GUIDE

PART III:

ADVANCED TOPICS

CHAPTER 14	Groups
CHAPTER 15	Effects
CHAPTER 16	Advanced Channel Lists
CHAPTER 17	Advanced Submaster Operation
CHAPTER 18	Profiles
CHAPTER 19	Advanced Cues
CHAPTER 20	Advanced Patching Options
CHAPTER 21	Macros
CHAPTER 22	Controlling Fade and Effect Rates with the Wheel
CHAPTER 23	Load Key Operations
CHAPTER 24	Selective Recording

CHAPTER 14:

Groups

A group is a set of channel levels that you can recall as a single group number. A group is just like a Normal submaster, except that a group does not have a fader like a submaster. Groups often represent "looks" on parts of the stage that can be used as building blocks to create cues, subs, effect steps, and other groups. There are a total of 200 groups available, which may be created in any order.

Recording Groups

Groups are created in two ways: "live" in the Stage display, or "blind" in the Group display. Groups are created in the Stage display by creating a "look" on stage, and then using the [RECORD GROUP] key. Using the [RECORD GROUP] key takes an instantaneous picture of the Stage display. Parked dimmers are not recorded.



EXAMPLE: To create a group "live" in the Stage display:

1. Set channel levels to obtain the desired "look" on stage.
2. [RECORD GROUP] [#] [ENTER] (If specified group already exists, the Overwrite Warning message appears.)



BASIC RULE: *Whenever any of the three dark gray [RECORD] keys are used, they record the channel levels that are currently active in the Stage display, no matter what display is being viewed when the command is entered. Parked dimmer levels are never recorded with any of the live Record commands.*



EXAMPLE: To create or edit a group "blind" in the Group display:

1. (SEL. GROUP) [#] [ENTER]
2. Adjust channels and levels.

When you record groups (subs, or cues), you may want to record only a specified list of channels rather than all channels that are active on stage. There are two ways to define the channels that you want to record:

- Specify the channels that you want to **include in** the Record command.
- Specify the channels that you want to **exclude from** the Record command.

? **BASIC RULE:** *Whenever you execute a Record command, the console assumes that you want to record live levels for **all** channels, unless you specify a different list of channels, or specify a list of channels to be excluded from the list of all channels.*



ADVANCED TOPICS: See Chapter 24, *Selective Recording*.

Recalling Groups

To recall a group, use the [GROUP] hard key.



EXAMPLE: To recall a group in all but the Cuesheet and Setup displays:

[GROUP] [12] [@] [FULL] [ENTER]

You can assign a level to a group in the Command Line. Levels within the group read proportionally to the level assignment of the group.



EXAMPLE: Let's say group 2 contains channels 1 - 4 at 80%. To assign group 2 to a proportional level of 50% in the Stage display:

[GROUP] [2] [@] [50] [ENTER]

(Channels 1 - 4 set at 40% on stage

(40%=50% of 80%).)


You can only edit groups in the Group display. An edit to an existing group affects levels only in the Group display. Edits made to a group are not updated to any other instances where the group was previously used to set channel levels.

Copying Groups


You can use the (COPY GROUP) soft key to copy the contents of one group into another group number in the Group display.

 **EXAMPLE:** To copy a group to group 2, in the Group display:

1. (SEL. GROUP) [#] [ENTER]
2. (COPY GROUP) [2] [ENTER]


 **EXAMPLE:** To copy any group to another group, in the Group display:

1. (COPY GROUP)
2. [CLEAR] [CLEAR] (Deletes current group default information in the Command Line, so you can enter a different group number.)
3. [source #] [@] [destination #] [ENTER] (Copies source group # into destination group #.)


 **BASIC RULE:** *The item number being copied from is the "source", and the number being copied to is the "destination" item.*

Renumbering Groups


You can renumber groups using the (RENUM GROUP) soft key in the Group display.

 **EXAMPLE:** To renumber the current group in the Group display:

1. (SEL. GROUP) [#] [ENTER]
2. (RENUM GROUP) [destination #] [ENTER]

 **EXAMPLE:** To renumber any group to another number in the Group display:

1. (RENUM GROUP)
2. [CLEAR] [CLEAR] (Deletes current group default information in the Command Line, so you can enter a different group number.)
3. [source #] [@] [destination #] [ENTER]

 **NOTE:** *When you renumber a group, the contents of the source group are assigned to the destination group, and the source group is deleted entirely.*

Deleting Groups

When you delete a group, both the group number and its contents are deleted. A group may be deleted in the Group display, or it may be cleared in the Setup display.



EXAMPLE: To delete a group in the Group display:
(DEL. GROUP) [# list] [ENTER] (An Overwrite Warning
message lists the total
number of groups that will be lost.)

CHAPTER 15:

Effects

What Are Effects?

An effect is a sequential series of lighting steps to which you can assign levels, times, and patterns. Effects were originally created to achieve "chase patterns" of lights, but effects can be used in many ways. The sequence and channel content of an effect is determined by its steps. Each effect step has a collection of channels assigned to it. All the steps played back in their numerical order defines each effect (unless the sequence is altered by a specific pattern).

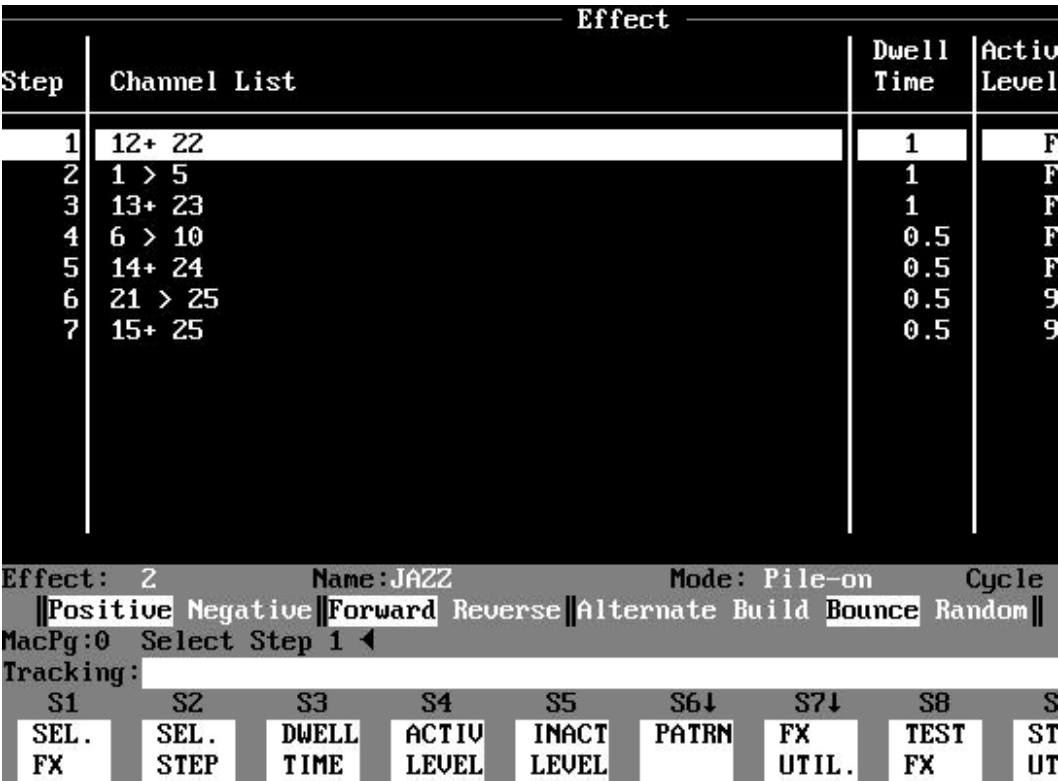


Figure 15.1, Effect Display


The Effect Display

You can use the Effect display to create new effects, or edit existing effects. The Effect display lists the contents and levels of each effect step, as well as the

pattern and total Cycle Time of each effect. In the Effect display, you can also test an effect before assigning it to a cue or submaster.




Creating Effects

To create a new "blank" effect, you must be in the Effect display. Use the (SEL. FX) soft key and assign a number to the new effect. You can also use this command to view existing effects.

 **EXAMPLE:** To create a new effect or view an existing effect in the Effect display:
(SEL FX) [#] [ENTER]


Creating Effect Steps

There are three methods to create the **first** step in a new effect.

-  (SEL. STEP) soft key
-  Down Arrow [?] key
-  Enter the contents of the first step, which automatically creates step 1.

Effect steps are always created in sequential order. You cannot create the next step number until you assign channels to the current step. Any step may be left blank by inserting, copying or renumbering a step. To create subsequent effect steps in order, you may use the Down Arrow [?], or the (SEL. STEP) soft key.


You can create the contents of an effect step from individual channels or channel lists. You can assign the contents of a submaster, group, or cue to the step by using it as a channel list. All channels you enter are assigned to the current step (the step shown in reverse video).

 **EXAMPLE:** To assign channels to the current effect step in the Effect display:

[# list] [ENTER]	(Assigns channels from a channel list.)
- or -	
[SUB] [#] [ENTER]	(Assigns channels from channel content of sub.)
- or -	
[GROUP] [#] [ENTER]	(Assigns channels from channel content of group.)
- or -	
[CUE] [#] [ENTER]	(Assigns channels from channel content of cue.)

Timing and Levels

The Dwell Time is the length of time the channels in each step remain at the Active Level of that step. Dwell Time may be any value between 0.1 - 999.9 seconds, in 0.1 second increments. The default Dwell Time is 1 second.

 **EXAMPLE:** To assign Dwell Time to an effect step:


- (SEL STEP) [#] [ENTER]
- or -
Move reverse video bar to desired step by using Up and Down Arrow keys.
- (DWELL TIME) [#] [ENTER] (New Dwell Time may track into subsequent steps.)


The newly assigned Dwell Time will track through all subsequent steps that have the same original Dwell Time as the edited step, until a different Dwell Time is encountered.

The Cycle Time is shown at the bottom of the display. The Cycle Time is the amount of time it takes the effect to execute all steps in order once. The Cycle Time is the sum of all Dwell Times in the effect.

Each step also has a level assignment for the Active Level and the Inactive Level. These levels may be any value between 0 and Full. The Active Level is the level at which the channels read during the Dwell Time of their step. The Inactive Level is the level at which the channels "rest" while each of the other steps execute.













The default Active Level for all steps is Full. The default Inactive Level is zero. Newly assigned Active and Inactive Levels track the new level assignment through all subsequent steps that have same Active and Inactive Levels as the edited step, until a different level is encountered.

-  **EXAMPLE:** To assign an Active Level to an effect step:
1. (SEL. STEP) [#] [ENTER]
- or -
Move reverse video bar to desired step by using Up or Down Arrow keys.
 2. (ACTIV LEVEL) [#] [ENTER] (New level may track into subsequent steps.)

-  **EXAMPLE:** To assign an Inactive Level to an effect step:
1. (SEL. STEP) [#] [ENTER]
- or -
Move reverse video bar to desired step by using Up or Down Arrow Keys.
 2. (INACT LEVEL) [#] [ENTER] (New level may track into subsequent steps.)

Effect Patterns

There are eight effect pattern options which used singly or in combination with other options can create many different patterns of light movement. The effect pattern options are as follows:

-   **POSITIVE** = Step channels are at their Active Level ("On") when the step is active.
-   **NEGATIVE** = Step channels are at their Inactive Level ("Off") when the step is active.
-   **FORWARD** = The steps run from step 1 to the highest step number, then begin again with step 1.
-   **REVERSE** = The steps run from the highest step number down to step 1, then begin again with the highest step.
-   **ALTERNATE** = Each full cycle of the steps switches between the Positive and Negative patterns. The beginning pattern is the one selected.
-   **BUILD** = Each step comes on and remains at its Active Level until the effect has completed one full cycle, at which point all steps except step 1 fade to their Inactive Level and the sequence of steps starts over.

? **HINT:** *If you want all channels to go to zero for a moment before the Build cycle begins again, insert a step 1 with no channels assigned to it.*

✍️ **BOUNCE =** Each full cycle of the steps switches between the Forward and Reverse patterns.

✍️ **RANDOM=** The steps ignore their numerical sequence and execute in a random order until all steps have become active once. Then the sequence begins again.

✍️ **EXAMPLE:** To assign effect patterns in the Effect display:

1. (SEL FX) [#] [ENTER] (Selects effect #.)
2. (PATRN) (Reveals another level of soft keys.)
3. Press appropriate pattern soft keys to obtain the effects pattern desired. The selected patterns are shown in reverse video in the Status Bar.

? **HINT:** *Experiment to become familiar with the patterns:*

1. *In the Effect display, create a 5-step effect with channel 1 in step 1, channel 2 in step 2 etc.*
2. *Assign a pattern or combination of patterns to the effect.*
3. *Test the effect (see next topic). Select the Stage display to view the effect.*
4. *Repeat these steps with each pattern and different pattern combinations to see the variety of effect patterns available.*

Testing an Effect

The (TEST FX) soft key gives you an opportunity to view the effect live before you assign it to a cue or a submaster. Edits can be made "live" to the effect being tested. The (TEST FX) soft key always loads the selected effect onto playback fader 4.

✍️ **EXAMPLE:** To test an effect in the Effect display:

(TEST FX) [#] [ENTER] (The effect loads to playback fader 4.)

Pile-On vs. Take Control Modes

Pile-On and Take Control are the two modes which determine how channels common to cues and effects will interact. Common channels are those that occur both in the current cue and the currently running effect.

In the Take Control mode, the common channels use the levels of the effect or cue that was last initiated. The effect channels replace the common cue channels if the effect was last initiated. The only levels visible are the Active and Inactive Levels of the effect channels. Running a cue will then "rob" common channels away from the effect. The Take Control mode uses the "last action takes precedence" principle.

? BASIC RULE: *"Take Control" effects take precedence over channels set at levels by cues, submasters, channel faders and keypad commands according to a "last action takes precedence" principle. Multiple Take Control effects always "pile on" with each other (highest level takes precedence).*

In the Pile On mode, the common cue and effect channels interact on stage in a "highest level takes precedence" manner. As the effect fades in and out, the previous value assigned to the common cue channels are maintained "underneath" the effect.

✍ EXAMPLE: Assume cue #1 contains channels 1 - 10 at a level of 50%, and effect #1 also contains channels 1 - 10. The Active Level is Full, the Inactive Level is zero.

Assume effect #1 is active during to cue #1.

In Take Control mode, channels 1 - 10 read at either Full or zero depending on the effect pattern. The assigned cue levels for channels 1 - 10 will not be seen.


In Pile On mode, channels 1 - 10 read at either Full or 50%, since the assigned level in the cue, 50%, is higher than the effect Inactive Level, zero. The level 50 takes precedence over zero.


✍ EXAMPLE: To assign the Pile On or Take Control mode to an effect:


1. (SEL, FX) [#] [ENTER]
2. (FX UTIL.)
3. (PILE/TAKE) (The default mode is Pile On when an effect is created. The (PILE/TAKE) soft key toggles between the two modes each time it is pressed.)


Assigning Effects to Submasters and Cues

An effect may be assigned as a cue attribute or assigned to a submaster. When an effect is assigned to a cue, the effect fades in during the up time of the cue. The effect remains running until a cue with a Fade Effect command is executed, at which time the effect fades out during the down time of that cue.


 **EXAMPLE:** To assign an effect to a cue in the Stage, Preview, Cuesheet or Tracksheet displays:
[CUE] [#] [EFFECT] [#] [ENTER]

 **EXAMPLE:** To assign the Fade Effect attribute to a cue in the Stage, Preview, Cuesheet or Tracksheet displays:
[CUE] [#] (FADE FX) [#] [ENTER]

 **ADVANCED TOPICS:** See Chapter 18, *Advanced Cues*.


 **NOTE:** A *Go To Cue* command stops all running cue effects immediately. A *Go To Clean Up* or *Go To Link* command permits cue effects to continue running. See Chapter 9, *Playing Back Cues*.

An effect assigned to a submaster may be activated anytime you move the submaster fader up or press the Bump button, depending on the mode of the Bump button. (See Chapter 7, *Basic Submaster Operation*.) An effect activated on a submaster with the fader will run at the proportional level set by the fader until the fader is taken to zero. Each time you move the submaster fader above zero, the effect begins with step 1.

 **EXAMPLE:** To assign an effect to a submaster from any display:

1. [LOAD] [EFFECT] [#] [ENTER]
2. Selected Bump button of desired submaster.


You can also assign an effect to a submaster when you change the submaster mode to "FX" in the Submaster display.

 **ADVANCED TOPICS:** See Chapter 17, *Advanced Submaster Operation*.


Editing Steps

You can edit the steps of the currently selected effect in the Effect display "blind", or you can edit "live" with the Test Effect feature. As in all "blind" displays, edits made in the Effect display are made to the show memory as they are executed.


The steps of existing effects can be altered with many different methods such as copying, renumbering, deleting, and inserting steps. The easiest way to change an individual step is to change its channel list, times or levels. Channels may be added to the existing list by beginning the command with the [+] key, removed from the list with the [-] key, or replaced entirely by entering a new channel list.

 **EXAMPLE:** To add channels to an existing step:

1. (SEL. STEP) [#] [ENTER]
2. [+] [# list] [ENTER]

 **EXAMPLE:** To "subtract" channels from an existing step:

1. (SEL. STEP) [#] [ENTER]
2. [-] [# list] [ENTER]

 **EXAMPLE:** To create an empty channel list in an existing step, you must delete the step and insert a new "blank" step:

1. (DEL STEP) [2] [ENTER] (Removes and reorders all following steps.)
2. (INS STEP) [2] [ENTER] (Recreates the step number with no contents and reorders all following steps.)

Copying Steps

You can copy effect steps under the (STEP UTIL.) soft key. The source step remains intact at its original number after it has been copied to the destination number. If the destination step already exists, the Copy command overwrites it. No Overwrite Warning message is given.

 **EXAMPLE:** To copy a step in the current effect:

1. (SEL. FX) [#] [ENTER]
2. (STEP UTIL.)
3. (COPY STEP) [destination #] [ENTER] (The current step #, and "@" appear in the Command Line.)



EXAMPLE: To copy a step other than the current step:

1. (SEL. FX) [#] [ENTER]
2. (STEP UTIL.)
3. (COPY STEP)
4. [CLEAR] [CLEAR], etc. (Clears current step from Command Line.)
5. [source #] [@] [destination #] [ENTER]

Renumbering Steps

You can renumber an effect step in the Effect display under the (STEP UTIL.) soft key. The source step moves to the location of the destination step and assumes the number of the destination step. The source step will no longer exist with its original contents and information. The Renumber command renumbers all steps following the removed source step. No steps are **ever** overwritten by the Renumber Step command.



EXAMPLE: To renumber the current step in the current effect:

1. (SEL. STEP) [#] [ENTER]
2. (STEP UTIL.)
3. (RENUM STEP) [destination #] [ENTER] (Current step # and "@" automatically appear in Command Line.)



EXAMPLE: To renumber a step other than the current step:

1. (SEL. STEP) [#] [ENTER]
2. (STEP UTIL.)
3. (RENUM STEP)
4. [CLEAR] [CLEAR], etc. (Clears current step from Command Line.)
5. [#] [@] [#] [ENTER]

Deleting Steps

You can delete a selected step in the Effect display under the (STEP UTIL.) soft key. All steps following the deleted step are renumbered.



EXAMPLE: To delete a step number in the current effect:

1. (STEP UTIL.)
2. (DEL. STEP) [#] [ENTER]



NOTE: *If you do not specify a step number, you will delete the current step, shown in reverse video.*

Inserting Steps

In the Effect display under the (STEP UTIL.) soft key, you can insert a blank step into an effect at any location. All steps following the inserted step will be renumbered.



EXAMPLE: To insert a step number in the current effect:

1. (STEP UTIL.)
2. (INS. STEP) [#] [ENTER]



NOTE: *If you do not specify a step number, you will insert a blank step before the current step, shown in reverse video.*

Effect Utilities

Under the (FX UTIL.) soft key there are several different options for manipulating existing effects. Effects may be copied, renumbered or deleted. If an existing effect number is assigned to a cue or a submaster, renumbering or deleting the effect will cause the contents of the cue or submaster to be lost. Note that the cuesheet still shows an effect number assigned to a cue, even if the effect does not exist.

Copying Effects

You can copy effects under the (FX UTIL.) soft key. The source effect in a Copy Effect command is left intact. If the destination effect already exists, an Overwrite Warning message appears and requests confirmation before replacing an effect. The default source effect is the current effect that you are viewing.



EXAMPLE: To copy the current effect in the Effect display:

1. (FX UTIL.)
2. (COPY FX) [destination #] [ENTER] (The current effect # and "@" appear in Command Line.)



EXAMPLE: To copy an effect other than the current effect:

1. (FX UTIL.)
2. (COPY FX)
3. [CLEAR] [CLEAR], etc. (Clears current effect from Command Line.)
4. [source #] [@] [destination #] [ENTER]

Renumbering Effects

You can renumber an effect in the Effect display under the (FX UTIL.) soft key. This moves the source effect to the new designated destination number and the source effect number is lost. If the destination effect already exists, an Overwrite Warning message requests confirmation before replacing it.



EXAMPLE: To renumber the current effect in the Effect display:

1. (FX UTIL.)
2. (RENUM FX) [destination #] [ENTER] (The current effect # and "@" appear in Command Line.)




EXAMPLE: To renumber an effect other than the current effect:


1. (FX UTIL.)
2. (RENUM FX)
3. [CLEAR] [CLEAR], etc. (Clears current effect from Command Line.)
4. [source #] [@] [destination #] [ENTER]

Deleting Effects

You can delete an effect in the Effect display under the (FX UTIL.) soft key. The Delete Effect command destroys the contents and the number of the effect.

 **EXAMPLE:** To delete the current effect:

1. (SEL. FX) [#] [ENTER]
2. (FX UTIL.)
3. (DEL. FX) [ENTER] (Overwrite Warning message appears.)
4. [ENTER]

 **EXAMPLE:** To delete an existing effect or effects other than the current effect:

1. (FX UTIL.)
2. (DEL. FX) [CLEAR] [CLEAR], etc. (Clears current effect from Command Line.)
3. [# list] [ENTER] (Overwrite Warning appears listing the number of effects that will be lost.)
4. [ENTER]

CHAPTER 16:


Advanced Channel Lists

Complex Channel Lists


Complex channel lists are, by definition, a collection of channels that use groups, submasters, cues, or effects to construct the list. A complex channel list can therefore be as complicated as several channel ranges, plus or minus individual channels within or outside those ranges. Any type of channel list may be addressed in all channel level-using displays (Stage, Preview, Group, Submaster, Effect, and Tracksheet).


You can build complex channel lists using many different resources, instead of just keying in every channel individually. These resources may be thought of as "building blocks". Channel ranges as well as channels that make up any group, submaster, cue, or effect can be considered building blocks. Groups, submasters, cues and effects are referred to by their item type and number in a complex channel list. Using an item type and number assigns all channels existing in that specified item the proportional level designated in the complex channel list command.

Items can be used alone in a complex channel list to address their channels, or they can be combined with other individual channels to include all desired channels in the list.

 **EXAMPLE:** Assume that group 1 is channels 1 - 10 at Full. To assign a level to channels 1 - 10 and channel 45, use the following command:
`[GROUP] [1] [+] [45] [@] [level #] [ENTER]`

In the example above, channels 1 - 10 are addressed by referring to group 1, and channel 45 is individually addressed. Channels may also be excluded from an item.


 **EXAMPLE:** Assume that group 1 is channels 1 - 10 at Full. To bring channels 1 - 5, and 7 - 10 to a level, use the following command:
`[GROUP] [1] [-] [6] [@] [level #] [ENTER]`


 **EXAMPLE:** The following is an example of a very complex channel list command:
`[GROUP] [5] [>] [8] [-] [CUE] [1] [+] [35] [>] [39] [-] [SUB] [1] [>] [3] [+] [EFFECT] [7] [@] [level #] [ENTER]`

Absolute vs. Proportional Levels

Complex channel assignments receive their level assignments in two different ways: absolute levels or proportional levels.


An absolute level assignment means the exact number (percentage level) specified in the Command Line is assigned to all channels in a complex channel list. This type of assignment occurs if the channels are directly specified in the Command Line, or when the type of command specifically requests absolute levels. Directly specifying absolute values is necessary when addressing the channels in cues, groups, or submasters by their item number instead of individual channels. To assign absolute levels to the channel list of a cue, submaster, or group, simply enter the item type twice in the Command Line.

 **EXAMPLE:** To assign absolute levels to individual channels:
[1] [>] [100] [@] [FULL] [ENTER] (Channels 1 -
100 read at Full.)

 **EXAMPLE:** To assign an absolute level to channels when addressing them through a group number:

[GROUP] [GROUP] [1] [@] [FULL] (Full level for all the channels in group 1, regardless of their existing level in the group.)

The other method of assigning levels to channels is referred to as proportional levels. Proportional level assignment occurs when channels in the command sequence have existing level assignments. This occurs when a collection of channels is referred to by its item number in the command sequence. When channels are addressed as part of an item such as a cue, submaster, or group, the level specified in the Command Line refers to a percentage of their pre-determined level, instead of an absolute level.


 **EXAMPLE:** Assume submaster 11 is channels 10 - 20 at a level of 50%. To set proportional levels:


[SUB] [11] [@] [FULL] [ENTER] (Channels 10 - 20 read at 50%.)

[SUB] [11] [@] [50] [ENTER] (Channels 10 - 20 read at 25%.)


A channel list that exists as an effect is an exception to the proportional rule. Channels in an effect are not assigned a single level, since they have Active and Inactive Level assignments. When channels in an effect are addressed by their effect number, they always accept the level assignment as an absolute level.


? **BASIC RULE:** *Any time a channel is addressed directly in a command sequence, it receives an absolute level. This is true even when a group, submaster, or cue is addressed in the same command sequence to receive a proportional level.*


 **EXAMPLE:** Assume all channels in group 1 are at 50%. To assign a mix of proportional and absolute levels:
[GROUP] [1] [+] [100] [@] [FULL] [ENTER] (Group 1 channels read at 50% - a proportional level. Channel 100 reads at Full, an absolute level.)


 **EXAMPLE:** To assign absolute levels to all channels in the command sequence:
[GROUP] [GROUP] [1] [+] [100] [@] [FULL] [ENTER]
(Assigns all channels in group 1 and channel 100 to a level of Full.)

If a group, submaster, effect, or cue number is not specified in the command sequence, then the default is the current item in each display.

 **EXAMPLE:** To set all channels in the current cue to a proportional level:
[CUE] [@] [#] [ENTER]


 **EXAMPLE:** To set all channels in the current cue to an absolute level:
[CUE] [CUE] [@] [#] [ENTER]

 **NOTE:** *The examples above apply also to groups and submasters.*

 **EXAMPLE:** To set all channels in the current effect to an absolute level:
[EFFECT] [@] [#] [ENTER]


Channel Lists Made with Ranges

You can use a range of items (cues, subs, groups, effects) to make channel lists. The command syntax is just like the syntax for a range of channels in a channel list.

 **EXAMPLE:** To set the channels in cues 1 - 5 proportionally to their levels as assigned in the cues:
[CUE] [1] [>] [5] [@] [FULL]

The previous Example works the same for ranges of groups, subs, and effects. Note that levels maintain their proportions as assigned in the cue (group or sub).

To assign an absolute level, perform the absolute level setting command by pressing the [CUE] key twice. This also applies to the [GROUP] and [SUB] keys.

 **EXAMPLE:** To set the channels in cues 1 - 5 to an absolute level of 100%:

[CUE] [CUE] [1] [>] [5] [@] [FULL]

CHAPTER 17:

Advanced Submaster Operation

Submaster Modes

There are three modes of operation that you can select for any submaster at any time in the Submaster display.

- ✂✂ Normal mode
- ✂✂ Effect mode
- ✂✂ Inhibitive mode


Normal submasters and their operation are discussed at length in Chapter 7, *Basic Submaster Operation*. Effect and Inhibitive submasters are significantly more complex.


Effect Submaster

An Effect submaster is any submaster with a specific effect number assigned to it. In an Effect submaster, the effect begins to run when you press the Bump button or move the submaster fader. The effect always starts over at its first step each time the Bump button is pressed or the submaster fader is moved above zero.

? **BASIC RULE:** *An effect on a submaster is re-initiated every time the submaster level moves from zero to a higher level.*

Using the Bump button to activate the effect allows the Active and Inactive levels to read on stage as they appear in the Effect display for the assigned effect. The submaster fader scales the effect levels. If the Active level of the effect is set to Full, but the submaster fader is set at 50%, then the Active level never reads above 50% while the effect is running on the submaster.


-  **EXAMPLE:** To create an Effect submaster in the Submaster display:
1. (SEL. SUB) [#] [ENTER]
 2. (SET SUB) (FX SUB) [effect #] [ENTER] (Submaster is now in Effect mode.)

 **NOTE:** Loading an effect to a submaster with the [LOAD] key also puts the submaster in Effect mode. See Chapter 23, Load Key Operations.

Take Control Effects on Submasters




You can assign effects as either Pile On or Take Control effects. In the Pile On mode, the effect interacts with other channels on stage in a "highest level takes precedence" manner. As the effect fades in and out, the previously assigned values that were on stage are maintained "underneath" the effect levels.

When the Take Control mode is selected for an effect assigned to a submaster, all channels on stage that are common to the effect channels change their levels to match the Active and Inactive levels of the effect, occurring as the effect begins. When the Take Control effect fades out completely, all channels that were controlled by the effect return to their previous levels.


 **BASIC RULE:** *"Take Control" effects take precedence over channels set at levels by cues, submasters, channel faders and keypad commands according to a "last action takes precedence" principle. Multiple Take Control effects always "pile on" with each other (highest level takes precedence).*

Inhibitive Submaster

An Inhibitive submaster "inhibits" the channels assigned to it from reading on stage, except in the following situations:


-  The submaster fader is above zero.
-  The Bump button is pressed down and held on.
-  The Bump button is toggled to On.

The level of the fader on an Inhibitive submaster scales the level at which inhibited channels read.

 **EXAMPLE:** Assume channel 1 is assigned to Inhibitive submaster 10, and channel 1 is set to 80% in cue 1. With the submaster 10 fader set at 50%, channel 1 in cue 1 cannot read any higher than 40%, as long as the Inhibitive submaster fader remains at 50%.

? BASIC RULE: *An Inhibitive submaster "masters" all channels assigned to it, much like the way the Grandmaster fader works for **all** channels.*

When a submaster is in Inhibitive mode, the symbol "***" appears under the affected channels in the Submaster display instead of channel levels.

 **EXAMPLE:** To create an Inhibitive submaster in the Submaster display:

1. (SEL. SUB) [#] [ENTER] (Selects sub #.)
2. (SUB TYPE) (Reveals Sub Type soft keys.)
3. (INHIB SUB) (Sub assigned as inhibitive. All channels assigned to the Normal sub are now inhibited.)
4. [# list] [@] [level #] [ENTER] (Channels in list comprise the sub.)


You can assign inhibited channels to cues, submasters, groups and effects, but their level assignments will not read in the Stage display or live on stage unless the Inhibitive submaster is activated. With the Inhibitive submaster fader in the zero position, its channels are shown as captured with no levels when they are assigned levels in the Stage display with the keypad. In all blind displays (Preview, Tracksheet, Group, etc.) the inhibited channels are not inhibited, and are shown at their assigned levels.

? HINT: *You can use an Inhibitive submaster to assign channels which are inhibited from reading at a level, for example, "one-time use" circuits for special lights or practicals. Special effect devices such as fog machines or flash pots might also be used on an Inhibitive submaster with Non-Dim dimmers.*

? HINT: *You can also use Inhibitive submasters to "sneak out" instruments that get knocked out of focus or instruments that are intermittent. Inhibitive subs may be pre-assigned as "sneak out" subs and left at Full. Channels can then be loaded to the sneak out sub as necessary, and faded out as the submaster is brought to zero.*


Changing Modes

You can change the mode on any single submaster any number of times during the course of a show. The submaster has the ability to remember the information from a previous mode.

 **EXAMPLE:** To change a submaster from Normal mode to Effect mode, and back to Normal mode (assume submaster 1 begins in Normal mode with channels 1 - 10 at Full):


1. (SUB TYPE) (FX SUB) [4] [ENTER] (Submaster 1 is assigned effect 4.)
2. (SUB TYPE) (NORML SUB) [ENTER] (Sub 1 changes back to Normal mode. Channels 1 - 10 reappear in sub at Full.)

Submasters remember previous effect number assignments. Each time you change the submaster mode to Effect, the submaster "remembers" the previously assigned effect number, unless you specify a new effect number.

 **EXAMPLE:** Using the Example above, change sub 1 back to Effect mode from Normal mode:

(SUB TYPE) (FX SUB) [ENTER] (No effect specified, sub 1 shows effect 4 still assigned to it.)

The same channels that are assigned levels in a Normal submaster are automatically used as the inhibited channels when the submaster is changed to Inhibitive mode. When you change the submaster back to Normal mode, the channels still have the same levels (unless you have assigned new levels while they were inhibited).

 **EXAMPLE:** To change a submaster from Normal mode to Inhibitive mode, and back to Normal mode (assume submaster 1 begins in Normal mode with channels 1 - 10 at 80%.

1. (SUB TYPE) (INHIB SUB) [ENTER] (Sub 1 changes to Inhibitive mode. Channels 1 - 10 show "***" for level assignments.)
2. (SUB TYPE) (NORML SUB) [ENTER] (Sub 1 changes back to Normal mode. Channels 1-10 reappear in sub at 80%.)

Channels added to a submaster while it is in Inhibitive mode are shown at the assigned level when that submaster is changed back to Normal mode.

CHAPTER 18:

Profiles

A profile is a method of customizing an output fade curve. You can assign a profile to dimmers, submasters and cues. Profiles assigned to dimmers determine the dimmer output when you control the dimmers with channel levels. If you assign a profile to a cue, the assignment affects all channels that are moving either up or down in that cue fade. If you assign a profile to a submaster, it affects all channels that are moving up or down when you move the submaster fader.

Each profile is divided into 20 equal sections and numbered in increments of 5%. The standard curve is a straight line (linear profile), meaning that at the 10% point, 10% of the total assigned output of the dimmer or cue has been achieved, at the 20% point, the output is 20%, etc.

You can use a profile any time you want a fade curve different than a straight linear fade. You can record up to 15 profiles, and each one may be assigned to any number of dimmers or cues.

You can use profiles to match output curve assignments between different kinds of dimmers, or different watt capacity dimmers. A 6kW dimmer and 2.4kW dimmer may have different outputs at a level of 50%. You can create a profile to allow the two different outputs to match. This is a useful tool when it is necessary to create uniform output from dimmers.

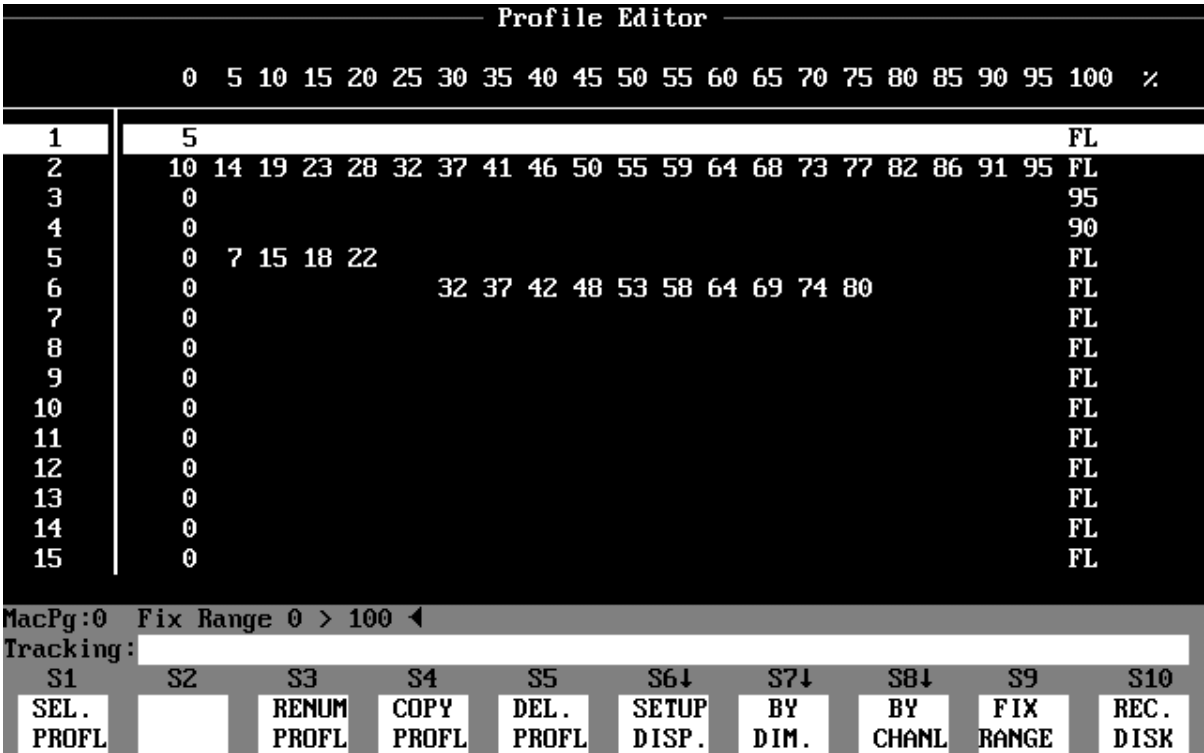



Figure 18.1, Profile Editor Subdisplay


Profile Editor Subdisplay


You can open the Profile Editor subdisplay from the Setup or Patch display under the (PROFL DISP.) soft key. In the Profile Editor subdisplay, the column to the far left contains the profile numbers, 1 - 15. The top row of numbers, 0 - 100%, represents the fader handle position for a fade profile, or the channel level for a dimmer profile. The values below the top row in each profile represent the fade progress or dimmer output at any given 5% interval in a fade curve. Each 5% interval is called a fade point. In a standard linear profile, each fade point is the same as the % number in the top row.

The current profile for editing is shown in a horizontal reverse video bar. When the profile is assigned to a cue, the profile represents the percent of the recorded level that the cue channels reach over the duration of the fade time. When the profile is assigned to a dimmer, the row of profile numbers represents the dimmer output for any given stage channel level.

 **EXAMPLE:** To set an output of 20% for the 30% fade point, in the Patch or Setup displays:


1. (PROFL DISP.)
2. (SEL. PROFL) [#] [ENTER] (Selects profile # as current profile to edit.)
3. [30] [@] [2] [ENTER] (Command Line says "Fade Point 30 @ 20".)

 **EXAMPLE:** To assign a profile to a dimmer(s) in the Patch: By Dimmer or Patch: By Channel display:
[DIMMER] [# list] [PROFILE] [#] [ENTER]


 **EXAMPLE:** To assign a profile to a cue in the Stage, Cuesheet, Tracksheet, Playback or Preview displays:
[CUE] [#] [PROFILE] [#] [ENTER]

Defined Fade Points vs. Calculated Fade Points

When you assign a new value to a fade point for a profile, you are "defining" this point as the new value. The defined value appears in the display at that fade point location. The values at fade point zero and fade point 100 are always defined in every profile. All of the fade points that are not displayed are automatically calculated by the console on a straight line between the defined points. For example, if you first define fade point 80 to have an output of 50%, then fade point 40 has a calculated output of 25%, and fade point 90 has a calculated output of 75%, even though the values are not displayed for these fade points.

 **BASIC RULE:** *Only defined fade point values are shown on the Profile Editor subdisplay; all calculated fade point values are not shown.*

If you want to restore a defined fade point as a calculated value, you can do so in a way that is similar to the way you restore tracking to hard non-tracking levels in the Tracksheet; simply don't specify a value for it in the command.

 **EXAMPLE:** To restore a defined fade point as a calculated fade point:

1. (SEL. PROFL) [#]
2. [fade point #] [@] [ENTER] (Do not specify any value.)

Fix Range

You can use the Fix Range soft key to define (i.e. "lock in") a range of fade point values. Pressing the (FIX RANGE) key shows the values of all calculated




fade points in a profile, thereby **defining** the fade points at those values. Fade points are fixed at each 5% mark. If you assign a new value to a fade point in the defined range of points, the points above and below it are not recalculated.



EXAMPLE: To define a range of fade points in an edited profile:
(FIX RANGE) [#] [>] [#] [ENTER]

Profile Utilities

There are three functions available in the Profile Editor subdisplay for manipulating profiles as follows:

-  Renumber Profile
-  Copy Profile
-  Delete Profile

Pressing the (RENUM PROFL) soft key reassigns the contents of the source profile to the new destination, erasing the contents of the source profile. Pressing the (COPY PROFL) soft key creates a second identical profile from the source profile and maintains the contents of both the source and destination profiles. Pressing the (DEL. PROFL) soft key deletes the contents of the selected profile.



EXAMPLE: To renumber the current profile:
(RENUM PROFL) [destination #] [ENTER] ("@" is
automatically inserted in Command
Line after the source profile number with
the Renumber, Copy and Delete commands.)



EXAMPLE: To renumber a profile other than the current profile:

1. (RENUM PROFL)
2. [CLEAR] [CLEAR] etc. (Clears default
profile from Command Line.)
3. [source #] [@] [destination #] [ENTER]



EXAMPLE: To copy the current profile:
(COPY PROFL) [destination #] [ENTER]



EXAMPLE: To delete the current profile:
(DEL PROFL) [#] [ENTER]

If you do not specify a number, the current profile will be deleted (the profile in reverse video).

Figure 18.2 shows some example profiles.

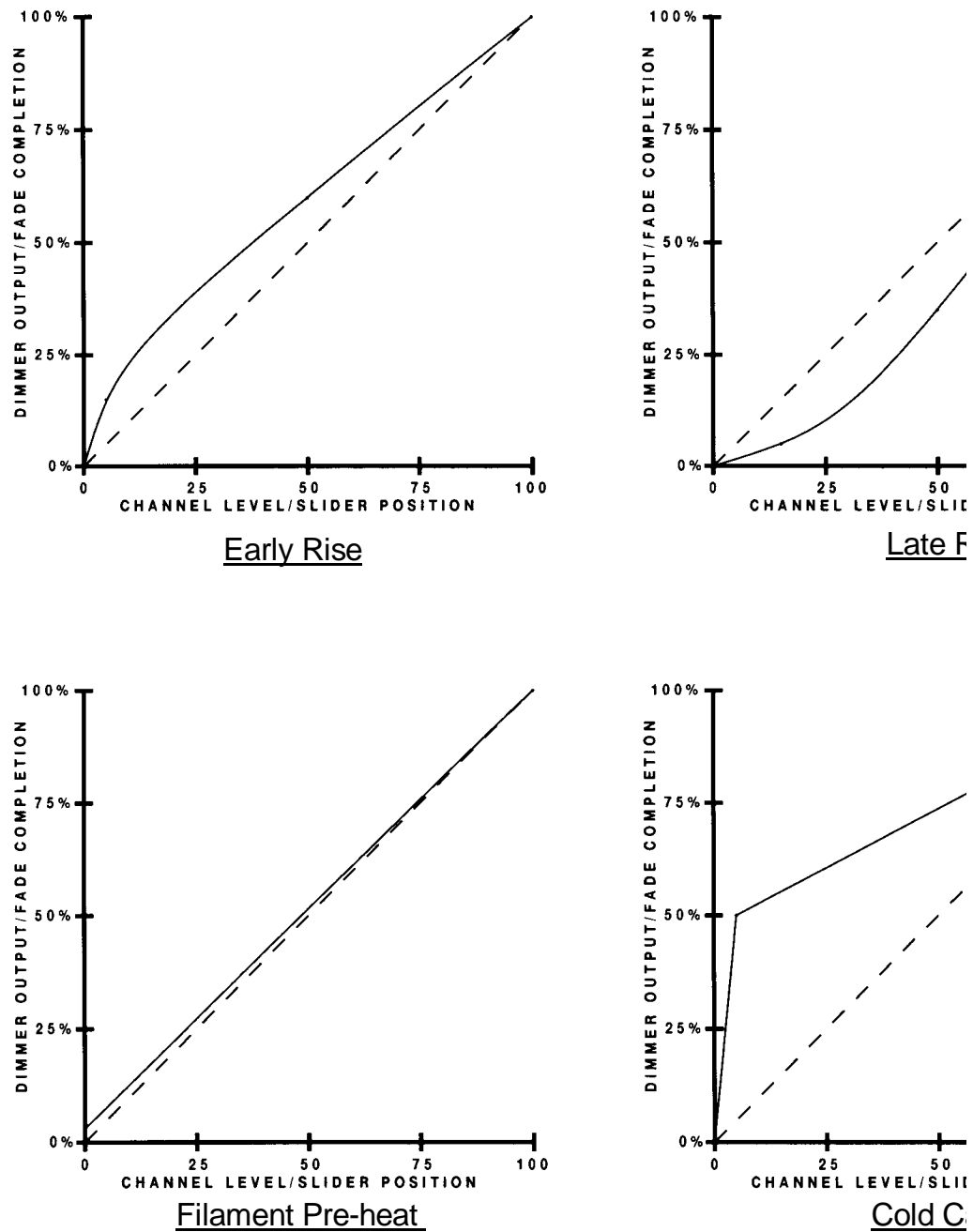


Figure 18.2, Example Profiles

CHAPTER 19:

Advanced Cues

Cue Follow

A Follow assigned to a cue causes the "next" cue in the cue sequence to **automatically** initiate without pressing the GO button for it. The Follow attribute is actually a delay time assignment with an automatic execution for the next cue. The amount of time that you specify for the Follow attribute determines when the "next" cue automatically begins. The Follow time assigned to a cue begins to count down when you press the GO button. At the completion of the Follow time, the next cue executes.

? **BASIC RULE:** *You must assign a Follow to a cue **before** the cue that you want to start automatically. A Follow is essentially a "count down" to automatically initiate the **next** cue in the cue sequence.*

A Follow time may be from 0 - 999.9 seconds in 0.1 second increments. A Follow time of zero seconds allows two consecutive cues to execute simultaneously. There is no limit to the number of consecutive cues to which you may assign the Follow attribute.

✍ **EXAMPLE:** To assign a Follow to a cue:
[RECORD CUE] [#] [FOLLOW] [#] [TIME] [#] etc. [ENTER]
- or -
[CUE] [#] [FOLLOW] [#] [ENTER] (Assigns Follow to an existing cue.)

✍ **EXAMPLE:** To assign a Follow to the current previous cue:
[FOLLOW] [#] [ENTER]

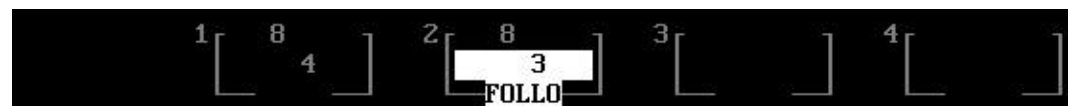



Figure 19.1, A Follow Cue in Playback Fader Box

The Follow time is shown on the second line of the Playback Fader Box. (See Figure 19.1.) The Follow time occupies its own playback fader, separate from the cue that initiated the Follow, and therefore you can use the [RATE] key to manually adjust a currently running Follow time. If you press the Take Control

button on the Follow's Playback fader during the Follow time, the Follow is cleared from the Playback fader and the next cue does not execute automatically. But if you press the Go button during a Follow countdown, the Follow is canceled and the next cue executes **immediately**.


 **NOTE:** *Cue Follows are ignored when a cue is assigned to a submaster, or executed with the Go To Cue command.*


Delay Time


You can assign a Delay time to a cue to delay the initiation of the fade by the amount of time that you specify. When you assign a Delay to a cue, pressing the Go button will start the Delay time to count down on the lowest available Playback fader. When the Delay time reaches zero, the fade will begin to run on the same Playback fader in its assigned time. The Delay column appears in the Cuesheet and Playback displays, and shows the Delay time assigned to each cue or cue part. You can assign Delays to each part of a multipart cue, as well as to the separate split times of a split fade cue (these topics are discussed later in this chapter).

? **HINT:** *Split Delays are especially useful when you want to delay lights that are coming up on one side of the stage from lights that are going down on the other side of the stage, or vice-versa.*

You can assign Delay times when you record a cue, or you can add a Delay to an existing cue.

 **EXAMPLE:** To assign a Delay in the Stage, Preview, Playback, Cuesheet, or Tracksheet display:
[RECORD CUE] [#] [TIME] [#] [DELAY] [#] [ENTER]
- or -
[CUE] [#] [DELAY] [#] [ENTER] (Adds a Delay to an existing cue.)

 **EXAMPLE:** To assign separate Delay times to a split cue:
[CUE] [#] [DELAY] [#] [+] [#] [ENTER]

 **EXAMPLE:** To delete an existing Delay, do not specify a time parameter:
[CUE] [#] [DELAY] [ENTER]

Note that when you assign a Follow to a cue, the Follow time delays the next cue's execution, starting from the last cue's initiation. Instead of using the Follow time as the delay, you could assign a Follow time of zero and then assign a Delay to the next cue. The difference between these two methods lies in how the Playback faders run the cues. When a Follow finishes counting down, the next cue loads to a **different** fader and begins to run. When a Delay finishes counting down, the cue fade runs on the **same** Playback fader. This is significant because when you use a Go, Go To Link, or Go To Clean Up command, it will not clear a Delay time counting down, but it **will** clear a Follow from the fader and prevent the next cue from running. Pressing the Take Control button for the Playback fader with a Delay counting down will take manual control of the cue on that fader.

? **BASIC RULE:** *A Follow belongs to the “first” cue, while a Delay belongs to the “next” cue. Technically, the next cue has not begun during a Follow countdown, but the next cue has already begun during a Delay countdown.*

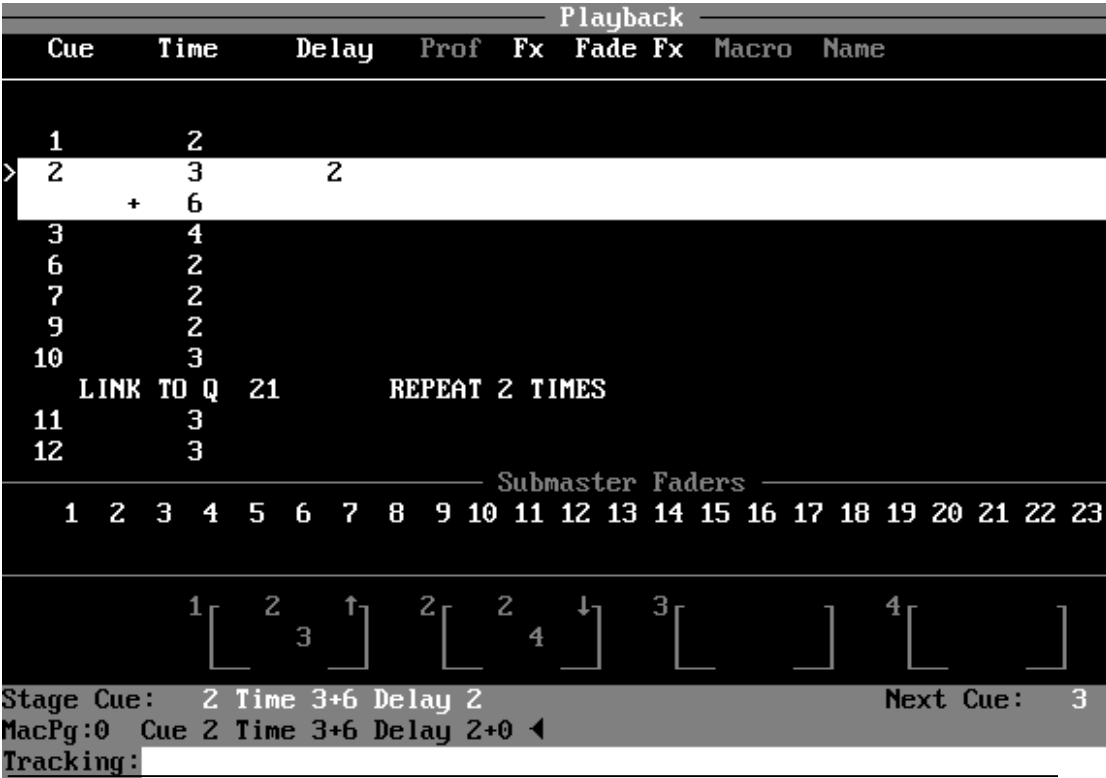


Figure 19.2, Split Fade


Split Fades


Split fades are fades that have separate "up" and "down" times. In the Command Line, the up time and down time are separated by a "+". The up


time (the first number in a command) is the fade time for those channels going to a higher level. The down time (the second number in a command) is the fade time for those channels going to a lower level.

Split fades run on separate faders. In a Playback Fader Box, the up arrow indicates the fader with the up portion of the fade. The down arrow indicates the fader with the down portion of the fade. To take manual control of a fade time, press the Take Control button and move the playback fader handle.

You can assign split delays to a split time. Again, the first number in the Command Line is the delay for the up time, and the second number is the delay for the down time. A command with a value on only one side of the [+] in the Command Line assigns a delay to only the up (or down) fade. If a cue is assigned a split delay time, the regular cue fade time automatically shows as a split delay time.

 **EXAMPLE:** To assign a split time to the current cue in the Stage, Preview, Cuesheet or Playback displays:
[TIME] [#] [+] [#] [ENTER]


 **EXAMPLE:** To assign separate delay times for up and down fades:
[DELAY] [#] [+] [#] [ENTER]


 **EXAMPLE:** To assign a split delay to only the up or down fade of a cue:


[DELAY] [#] [+] [ENTER]	(Assigns the
delay to the up time only.)	
- or -	
[DELAY] [+] [#] [ENTER]	(Assigns the
delay to the down time only.)	

Cue Profiles

You can assign a profile to a cue fade so that the fade reflects the curve of the assigned profile. Any of the 15 profiles can be used for a cue profile, including profiles that are already used for dimmer profiles. One example of using a cue profile would be if you have a long slow fade, like a sunrise or a sunset, and you want the fade to be faster at the end. You can assign different profiles to each part of a multipart cue, and to the separate up and down times of a split fade.


 **NOTE:** *Cue profiles must begin at zero and end at Full to function correctly.*


 **EXAMPLE:** To assign a profile to a cue fade:
[RECORD CUE] [#] [PROFILE] [#] [ENTER]
- or -
[CUE] [#] [PROFILE] [#] [ENTER] (Assigns a profile
to an existing cue.)

 **EXAMPLE:** To delete a profile from a cue fade:
[CUE] [#] [PROFILE] [ENTER] (Do not specify a
profile number.)

Cue Macros

You can assign a macro to a cue or a cue part to automatically execute functions when a cue is executed. Use the (CUE MACRO) soft key that appears when the [RECORD CUE] or [CUE] key is pressed. The specified macro will execute when the cue fade begins. This means that the cue macro will execute after all follows and delays are finished. This feature can be very useful for reprogramming submasters, or for capturing specific channels on the wheel for overriding cue control. Another useful application is to assign rate control in a cue macro for a cue or effect that requires it in every performance. This way the rate will always be ready on the wheel when the cue is initiated.

 **EXAMPLE:** To assign a macro to a cue or part:
[RECORD CUE] [#] [PART] [#] (CUE MACRO) [#] [ENTER]
- or -
[CUE] [#] (CUE MACRO) [#] [ENTER] (Assigns a cue
macro to an existing cue.)

 **EXAMPLE:** To delete a macro from a cue:
[CUE] [#] (CUE MACRO) [ENTER] (Do not specify a
number.)

Cue Names

You can assign a 16-character name to any cue. The name appears in the Stage, Preview, Cuesheet, and Playback displays. Use the Bump buttons and numeric keypad to select the characters for the name. The Bump buttons will automatically enter Alpha mode when the (NAME CUE) soft key is pressed. It appears every time that the [RECORD CUE] or [CUE] key is pressed. Each cue can have only one name. You can use the cue name in “Go To” and other cue commands instead of specifying a number (see Chapter 11, *Names*).



EXAMPLE: To assign a name to a cue:

[RECORD CUE] [#] [PART] [#] (NAME CUE) [name] [ENTER]

- or -

[CUE] [#] (NAME CUE) [name] [ENTER]

(Assigns a name to an existing cue.)



EXAMPLE: To delete a name from a cue:

[CUE] [#] (NAME CUE) [ENTER]

(Do not specify a name.)

Cue Links

You can execute cues out of their normal numeric sequence by assigning a Link to a cue. When you press the GO button, instead of executing the next higher numbered cue, the cue execution sequence will "jump" to the destination cue that you specify in the Link assignment. The execution sequence continues onward from that destination cue indefinitely, or until a Link Return is encountered in a later cue. (See Link Return, the following topic.)



EXAMPLE: To assign a Link to a cue in the Stage, Preview, Cuesheet, Playback, or Tracksheet displays:

1. [CUE] [#] [LINK] [destination cue #] [ENTER] (Assigns the link to an existing cue.)

2. [LINK] [destination cue #] [ENTER] (Assigns the Link to the current cue


in the display.)


Link Returns

When you assign a Link Return to a cue, it causes the cue execution sequence to return to the original sequence following the most recent cue with a Link assignment that was executed. The application of a Link and a Link Return allows you to create "cue subroutines" that you can access repeatedly in your show. This can save you programming time and cue memory space.

Cuesheet								
Cue	Time	Delay	Prof	Fx	Fade	Fx	Macro	Name
9	2							
10	3							
LINK TO Q 21								
11	3							
12	3							
13	2							
14	3							
15	2							
16	3							
17	3							
20	2							
21	2							
22	3							
> 23	2							
LINK RETURN								
24	2							
Cue: 23 Time 2 Return Stage Cue: 10 Next Cue								
MacPg:0 Cue 23 Return ◀								
Tracking:								
S1	S2	S3	S4	S5	S6	S7	S8	S9
TRACK	SEL.	RENUM	COPY	DEL.				
MODE	CUE	CUE	CUE	CUE				

Figure 19.3, Cue Link Return

 **EXAMPLE:** To assign a Link Return to a cue from the Stage, Preview, Cuesheet, Playback, or Tracksheet displays:
[CUE] [#] (LINK RETURN) [ENTER]

 **EXAMPLE:** To set up a Link from cue 10 to cue 21, with a Link Return from cue 23 back to the original cue sequence:

1. [CUE] [10] [LINK] [21] [ENTER] (Link to destination cue 21.)
2. [CUE] [23] (LINK RETURN) [ENTER] (Link Return assigned to cue 23.)


The cue execution sequence would run like this: 9, 10(Link), 21, 22, 23(Link Return), 11, 12, etc.


Link Repetitions

You can use Link Repetition command to specify how many times you would like a linked sequence to be repeated. You must always assign the Link Repetition attribute to the cue that has the Link assigned to it.

Cuesheet								
Cue	Time	Delay	Prof	Fx	Fade	Fx	Macro	Name
9	2							
> 10	3							
	LINK TO Q	21						REPEAT 2 TIMES
11	3							
12	3							
13	2							
14	3							
15	2							
16	3							
17	3							
20	2							
21	2							
22	3							
23	2							
	LINK RETURN							
24	2							
Cue: 10 Time 3 Link 21 Reps 2 Stage Cue: 10 Next Cue: 21								
MacPg:0 Cue 10 Reps 2 ◀								
Tracking:								
S1	S2↓	S3	S4	S5	S6	S7	S8	S9
TRACK	SEL.	RENUM	COPY	DEL.				
MODE	CUE	CUE	CUE	CUE				

Figure 19.4, Cue Link Repetitions

 **EXAMPLE:** To assign a Link Repetition to a cue from the Stage, Preview, Cuesheet, Playback, or Tracksheet display:
[CUE] [#] (LINK REPS) [#] [ENTER]

 **EXAMPLE:** Using the same Example above, to assign cue 10 a Link Repetition of 2:
[CUE] [10] (LINK REPS) [2] [ENTER]

The cue execution sequence would now run like this: 9, 10(Link), 21, 22, 23(Link Return)(Link repeats once), 21, 22, 23(Link Return) (Link repeats twice), 21, 22, 23(Link Return), 11, 12, etc.


Pay special notice to the fact that the number of link repetitions indicates the number of **additional** executions of the link; it does not include the first execution of the linked sequence. In this case we specified **two repetitions**, so the linked sequence **actually runs three times** before the cue execution sequence returns to cue 11.

Link Loops and Specifying Repetitions

In the preceding Examples, the Links all have destination cues that have a higher number than the cue assigned the Link. But what if you link to an earlier cue? This creates a Link Loop.

Cuesheet									
Cue	Time	Delay	Prof	Fx	Fade	Fx	Macro	Name	
2	1								
3	1								
4	2								
5	2								
6	3								
7	1								
8	4								
9	2								
> 10	3								
	LINK TO Q	8							
11	0								
12	2								
21	2								
22	3								
23	2								
Cue: 10 Time 3 Link 8 Stage Cue: 9 Next Cue									
MacPg:0 Cue 10 Link 8 ◀									
Tracking:									
S1	S2↓	S3	S4	S5	S6	S7	S8	S9	S10
TRACK MODE	SEL. CUE	RENUM CUE	COPY CUE	DEL. CUE					


Figure 19.5, Cue Link Loop

 **EXAMPLE:** Using the same Example above, to assign cue 8 as the destination cue instead of cue 21:

[CUE] [10] [LINK] [8] [ENTER] (Creates loop that runs indefinitely.)

The cue execution sequence would be: 7, 8, 9, 10(Link), 8, 9, 10(Link repeats), 8, 9, 10(Link repeats), 8, 9, 10(Link repeats), 8, and so on indefinitely.

You can assign a Link Repetitions value to the Link to specify how many times you want the loop to run before it continues with the normal cue execution sequence.

 **EXAMPLE:** Using the Example above, to assign a Link Repetitions value of 1 to cue 10:

[CUE] [10] (LINK REPS) [1] [ENTER]

Cuesheet									
Cue	Time	Delay	Prof	Fx	Fade	Fx	Macro	Name	
2	1								
3	1								
4	2								
5	2								
6	3								
7	1								
8	4								
9	2								
> 10	3								
	LINK TO Q	8						REPEAT 1 TIME	
11	0								
12	2								
21	2								
22	3								
23	2								
Cue: 10 Time 3 Link 8 Reps 1									
MacPg:0 Cue 10 Reps 1 ◀									
Tracking:									
S1	S2↓	S3	S4	S5	S6	S7	S8	S9	S10
TRACK	SEL.	RENUM	COPY	DEL.					R
MODE	CUE	CUE	CUE	CUE					D

Figure 19.6, Cue Link Repetition

In the Example above, the new cue execution sequence would be: 7, 8, 9, 10 (Link executes once), 8, 9, 10, 11, 12, and so on. Notice that the sequence of cues 8, 9, and 10 actually runs **twice**, because of the Link.

Tracksheet																				
Channel	00 01	00 02	00 03	00 04	00 05	00 06	00 07	00 08	00 09	00 10	00 11	00 12	00 13	00 14	00 15	00 16	00 17	00 18	00 19	00 20
1	10																			
2	10	20																		
> 3	10	20	30																	
4	10	20	30																	
5	10	20	30																	
6	10	20	30																	
7	10	20	30																	
8	10	20	30																	
9	10	20	30																	
10	10	20	30																	
11	10	20	30																	
12	10	20	30																	
21	10	20	30																	
22	10	20	30																	

Cue: 3 Time 1 Stage Cue: 9 Next Cue

MacPg:0 @ 30 ◀

Tracking:

S1	S2↓	S3	S4	S5	S6	S7	S8	S9
TRACK	SEL.	RENUM	COPY	DEL.	SHOW	SHOW	REM.	RST
MODE	CUE	CUE	CUE	CUE	CHANL	ALL	DIM	

Figure 19.7, Tracking Levels in Link Commands

Tracking Levels in Link Commands

When you are using a link to a cue that has tracking "soft" levels, a special condition occurs. The stage "look" created by a cue in a sequence is usually made up of a combination of hard levels (those changes assigned in that specific cue) and soft levels (those levels that track in from a previous cue). When the link is executed, only hard (non-tracking) channel levels are affected. The tracking soft level assignments remain at their current levels when a link occurs. This causes the stage "look" to be different when a cue is reached by a link instead of by the normal numeric cue sequence progression.




EXAMPLE: Refer to Figure 19.7. In the Tracksheet display:

1. Assign a level of 10 % to channel 1 in cue 1.
2. Take channel 2 in cue 2 to 20%. (Channel 1 tracks at 10%.).
3. Take channel 3 in cue 3 to 30%. (Channel 2 tracks at 20%, channel 1 tracks at 10%.)
4. Link cue 1 to cue 3.
5. Starting at cue 0, press Go. (Cue 1 runs.) (Stage display shows channel 1 at 10% in red.)
6. Press Go. (Cue 3 runs) (Stage display shows channel 1 at 10% in gray, and channel 3 at 30%. Channel 2 does not read on stage.)








In the previous Example, Channel 2 does not read on stage because the cue in which the level change occurred was never executed. To avoid an alteration of the original stage look of the destination cue, you must make all existing levels hard levels in the destination cue of the link. Based on the Example above, to preserve the stage "look" assign the Clean Up attribute to cue 3. This assigns hard levels to all channels.

? BASIC RULE: *When you assign a link to a destination cue that has tracking "soft" levels (including tracking zeros) only hard levels are affected. The destination cue "adds" its hard levels to the former stage look. To "replace" the former stage look with the destination cue, assign the Clean Up attribute to the destination cue.*

 **NOTE:** *If you use a Link Return to return to the normal cue sequence, the same rules apply (only hard level changes occur). You may need to assign the Clean Up attribute to the "next" cue in order to fully replace the stage look when you return to the original sequence.*

Multipart Cues

A multipart cue is a way that you can cause different level changes with different timing attributes within a single cue. With one press of the GO button, you can start fast and slow fades, with or without delays and other cue attributes. A multipart cue can contain up to four parts. You can assign a different value to each cue part for the following attributes:

 Time	 Effect
 Delay	 Fade Effect
 Profile	 Cue Macro
 Split Fades	

Some cue attributes are assigned to the cue as a whole and not to individual parts, as shown on the following list:

 Link	 Follow
 Link Return	 Cue Name
 Link Repetitions	


If you want a part to start to fade after other parts begin fading, assign a delay to that part. If you want a part to fade slower or faster than the other parts,

assign a longer or shorter fade time to that part. Note that you may even assign a split fade to a single cue part.

Since a multipart cue is treated as a single cue with separate timing values, a channel can only have its level change in one part of a multipart cue. If the change occurs in the first part, the same level appears to "track" through the other parts. If the change occurs in a later part, the channel level from the previous cue appears to "track" through the earlier parts. This is consistent with the part numbering (1 - 4) and does not take into account which parts actually execute first based on their timing values.

Creating Multipart Cues


You can create a single part of a multipart cue in the same way that you create a regular cue. You compose a look on stage, and use the Record Cue command specifying a cue and part number rather than just a cue number.

 **EXAMPLE:** To record a cue part live (from on stage) from any display:

[RECORD CUE] [#] [PART] [#] [TIME] etc. [ENTER]

If you do not specify a part number in the command, the lowest numbered cue part is assigned by default.

You can also create a cue part "in the blind" from the Preview, Cuesheet, Playback or Tracksheet display, just as with normal cues.

 **EXAMPLE:** To create a cue part "blind" from the Preview, Cuesheet, Playback, and Tracksheet displays:


[CUE] [#] [PART] [#] [TIME] etc. [ENTER]

- or -

[PART] [#] [TIME] etc. [ENTER]

(Creates a part in the current Preview cue.)

Note that the current Track mode only affects the first cue part that you create. The subsequent parts will **appear** to have tracking levels, but these are levels that are already defined by the first part that was created, so they may **not really** be tracking levels for the cue as a whole.

 **BASIC RULE:** *A multipart cue is treated as a single cue with different timing values assigned to each part. A channel level can change (be assigned a hard level) in **only one part**.*

Viewing Multipart Cues

You can view multipart cues different ways in different displays.



EXAMPLE: To see a part live on stage, in the Stage display:
[GO TO CUE] [#] [PART] [#] [ENTER]

The Example above shows you the end result of the cue part and any lower numbered cue parts.



EXAMPLE: To page through cue parts to select a specific part for viewing in the Preview display:

[CUE] [#] [PART] [#] [ENTER]

- or -

[NEXT] and [LAST]



NOTE: *In the Example above, be aware that the Cue Part command creates the part if it does not yet exist!*

The color of individual channel levels indicates the changes that occur to them, as in the Stage display.

Tracksheet offers what many people think is the best way to view a multipart cue. This is because it shows you the channel levels for all parts of the cue at the same time, so you can easily see which channel levels change in which cue part.

Editing Levels in Multipart Cues

You can edit channel levels in cue parts just like you edit normal cues. You can re-record cue parts live on stage with the Record Cue command, or you can edit them "in the blind" in the Preview or Tracksheet displays. The only different concept you must remember is that a channel level change (a hard level) can occur in **only one part** of the cue.

In the Preview display, when you address a channel level, the level change occurs in the current preview cue part. You cannot see any changes that occur in the other parts, unless you view those parts with the [NEXT] and [LAST] keys. In the Tracksheet display, you can view all the parts at the same time, so you can see how your edits affect all parts.

? **HINT:** *Use the Tracksheet display to edit multipart cues, because you can view all parts simultaneously.*

When you assign a new channel level in the Preview or Tracksheet displays, the new level is assigned as a hard level in the current Preview cue part. If the channel had a hard level assigned to it in another part, that part's level is now shown as a tracking "soft" level. It is shown as tracking through from the previous cue (if it is a lower numbered part), or it tracks through the same level (if it is a higher numbered part).

? **BASIC RULE:** *You can change a channel level (assign a hard level) in only one part of a multipart cue.*

Using Clean Up in Multipart Cues

When you assign the Clean Up attribute to a multipart cue, the attribute appears to exist in only one part. If you create a cue in the Clean Up mode, the first part you create is the cleanup part. All channels that are not assigned levels in any parts of a cleanup multipart cue are assigned hard zeros in the cue part with the Clean Up attribute. Even if you remove the Clean Up attribute from a given part, or assign it to a different part, the hard zeros remain in the original Clean Up part (just like they do for normal cues). The Clean Up indicator moves to the newly designated Clean Up part in the Cuesheet and Playback displays. In reality, the Clean Up attribute is assigned to the multipart cue as a whole, but the hard zeros must always reside within a given cue part.

Playback of Multipart Cues

All parts in a multipart cue begin to execute when you press the GO button. Each part executes in the time that you assign to it. Any delays that you assign to a cue part also execute before the part begins its fade. You may assign a Manual fade time to any or all parts of a multipart cue.

Each cue part occupies a separate playback fader. If you assign a split time to a cue part, each half of the split fade also occupies a separate playback fader. In such a case where there are more than four fades occurring at the same time, the playback faders load according to the priority described in the Fader Loading Hierarchy topic in Chapter 9, Playing Back Cues.

When you use the Go To Cue command, you may specify a cue part. The stage shows the look of the cue, up to the part number that you specify, including any lower numbered parts. If you do not specify a cue part, the stage look reflects

the completion of the cue with all its parts. The Go To Link and Go To Clean Up commands do not recognize specific cue parts. These specialized Go To commands treat a multipart cue as a whole. Similarly, the [STOP/REV] key also causes the stage look to reflect the completion of all parts.

Assigning Effects to Cues

The Effect and Fade Effect assignments for cues appear in the appropriate column in the Playback and Cuesheet displays. When an effect is assigned to a cue, the up time of the cue is the time during which the effect fades in. The effect remains on stage until the Fade Effect command is executed. The effect fades out during the down time of the cue containing the Fade Effect assignment.



EXAMPLE: To assign an effect to a cue:

[RECORD CUE] [#] [EFFECT] [#] [ENTER]

- or -

[CUE] [#] [EFFECT] [#] [ENTER] (Assigns an effect to an

existing cue.)

Channel levels may also change with Effect cues or Fade Effect cues. An effect may be assigned to a cue part if you want to keep the effect fade time separate from the timing of other channel level changes.

Effects in cues stop running immediately when either the Go To Cue or Stop/Reverse command is executed. To reinitiate a cue effect, start in the cue preceding the effect cue and press the GO button, or use the Go To Cue Link or Go To Cue Clean Up command.



BASIC RULE: *When recording a cue, group or submaster live from stage with an effect running, take out the effect on stage with the playback fader or submaster before executing the Record command. The live Record commands record an instantaneous stage picture, and therefore record channel levels from the effect if the effect is left running.*

CHAPTER 20:

Advanced Patching Options

Dimmer Profiles

When you assign a custom profile to a dimmer, it alters the standard "linear" fade curve characteristic of the dimmer. If you assign profiles to dimmers, the dimmer profiles are in use whenever you control dimmers with channel levels. Direct Dimmer Control always bypasses any dimmer profiles. Dimmer profile assignments are shown in the fourth column of the Patch display.



EXAMPLE: To assign a profile to dimmers in the Patch display:
[DIMMER] [# list] [PROFILE] [#] [ENTER]



ADVANCED TOPIC: For more information about profiles, see Chapter 18, *Profiles*.

Proportional Levels

When you assign a proportional level to a dimmer, it limits the maximum output of the dimmer to the percentage specified. For example, a dimmer assigned a proportional level of 50% never exceeds 50% output level, even when the channel controlling that dimmer is at Full. In this case, a channel level of Full provides 50% dimmer output. The same channel at 50% would provide a dimmer output of 25%. The entire curve assignment of the dimmer is reduced proportionally to the level assigned. Proportional level assignments are shown in the third column of the Patch display.



EXAMPLE: To assign a proportional level to dimmers in the Patch display:

[DIMMER] [# list] (DIM. LEVEL) [#] [ENTER] (Specifies the

dimmers to assign a proportional level.)

- or -

(DIM. LEVEL) [#] [ENTER]

(Assigns proportional level to the current dimmer shown in reverse video.)

(Assigns

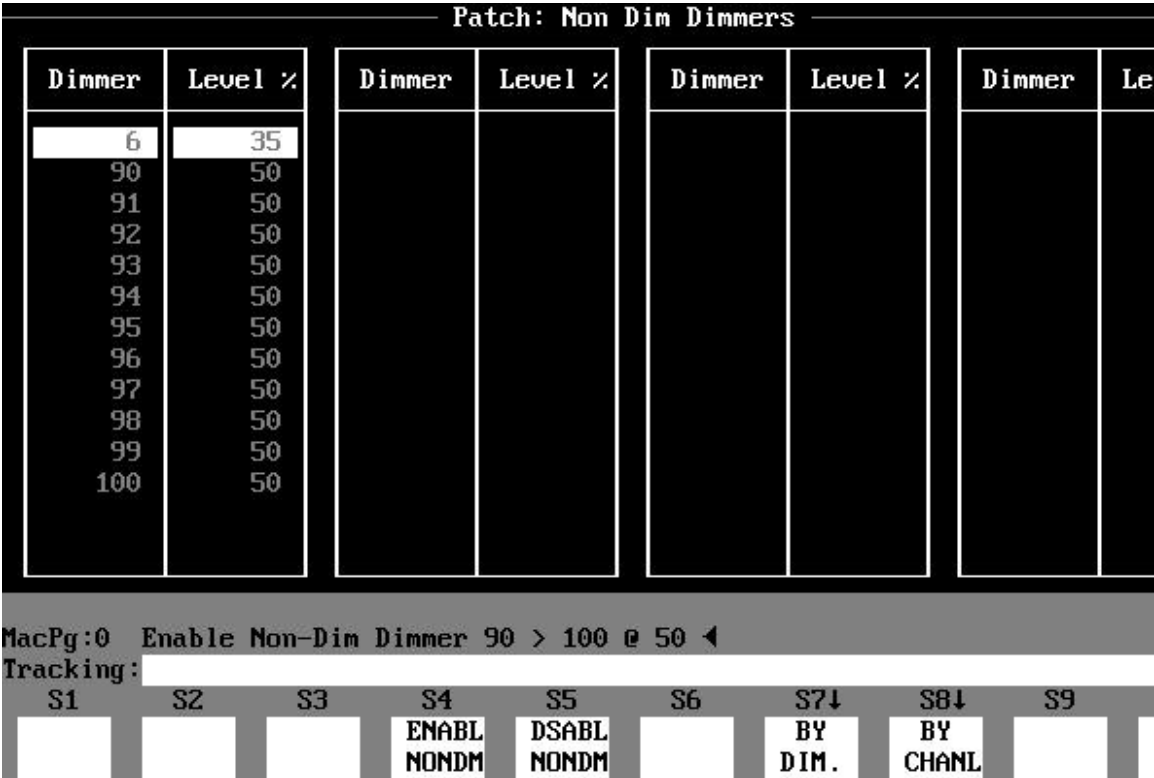



Figure 20.1, Patch: Non-Dim Dimmers Subdisplay


Non-Dim Dimmers (Virtual Non-Dims)

In the Patch: Non-Dim Dimmers subdisplay, you can select any dimmer to behave like a non-dim dimmer. This means that the actual dimmer output on stage is zero until the dimmer level in the console reaches a “trigger level,” at which point the dimmer output immediately goes to Full. This is useful for practical lighting on your set, such as table lamps, or other lights that actors may turn on “on cue.”

To access the Patch: Non-Dim Dimmers subdisplay, use the (NONDM DISP.) soft key found in the Patch display. The Patch display remains in the Non-Dim Dimmers subdisplay until you use the (BY CHANL) or (BY DIM) soft key to return to the “regular” Patch display.

 **EXAMPLE:** To enable the virtual non-dim function for a dimmer(s) in the Patch: Non-Dim Dimmers subdisplay:
(ENABL NONDM) [DIMMER] [# list] [@] [trigger level] [ENTER]
- or -
(ENABL NONDM)[#][@][trigger level][ENTER] (This enables the non-dim function for all the dimmers patched to the specified **channel**.)

Note that you can substitute a dimmer list using a channel, or any channel list composed of groups, cues, effects, or submasters.

 **EXAMPLE:** To disable the virtual non-dim function for a dimmer(s) in the Patch: Non-Dim Dimmers subdisplay:

(DSABL NONDM) [DIMMER] [# list] [ENTER]


- or -

(DSABL NONDM) [ENTER]

(Disables current dimmer

shown in reverse video.)

When you assign a virtual non-dim, you may select any trigger level, from one (01) to Full. If you do not specify a trigger level, the trigger level is automatically set to 50% by default. All profiles and proportional dimmer levels are taken into account for virtual non-dims. For example, if you have a trigger level of 40% and a proportional level of 80% assigned to a virtual non-dim dimmer, the dimmer output reads at Full on stage when the channel controlling the dimmer reaches 50%, or when Direct Dimmer Control of the dimmer reaches 40%. Note that the Direct Dimmer Control window does not show actual dimmer output on stage for virtual non-dims, but rather the internal dimmer level within the console.


 **NOTE:** *When you assign a virtual non-dim at the console, it has no effect on the settings at your dimmer rack. In a manner of speaking, the dimmer signal from the console is assigned a profile that “jumps to Full” at the trigger point. The dimmer output continues to be regulated voltage if your dimmer rack regulates the output voltage of your dimmers. For this reason, the virtual non-dim setting is not recommended for use with motors, ballasts, and other inductive loads. A “true non-dim” setting at the dimmer rack should be used for these types of loads. Consult the operational manual for your dimmer rack.*

If you want to use a virtual non-dim that does not have a level of Full, you can experiment by making different profiles and assigning them to the dimmer, instead of using the virtual non-dim feature.

Parking Dimmers

Parking dimmers is a way of locking their output to a specified “parked” level. The parked level is maintained regardless of any channel setting commands, including Grandmaster level, Blackout switch position, playback of cues, submaster level changes, live running effects, and all channel commands on the keypad. The **only way** to override the parked output level of a dimmer is to unpark it, or to use Direct Dimmer Control. When you use Direct Dimmer Control, you temporarily override the parked level; when you release Direct

Dimmer Control over a parked dimmer, the dimmer output returns to its parked level.

 **EXAMPLE:** To park dimmers at their current level in the Patch: Parked Dimmers or Stage displays:


(PARK) [DIMMER] [# list] [ENTER]

- or -

(PARK) [# list] [ENTER] (Parks all dimmers

patched to the specified **channels**

at their current levels.)

 **EXAMPLE:** To park dimmers at a specified level in the Patch: Parked Dimmers or Stage displays:


(PARK) [DIMMER] [# list] [@] [level] [ENTER]

- or -

(PARK) [# list] [@] [level] [ENTER] (Parks all dimmers

patched to the specified **channels**

at the specified level.)


 **EXAMPLE:** To park all dimmers patched to all channels in a specific cue, group, or submaster in the Patch: Parked Dimmers or Stage displays:

(PARK) [CUE, GROUP, or SUB] [# list] [ENTER]

- or -

(PARK) [CUE, GROUP, or SUB] [# list] [@] [level] [ENTER]

You can construct dimmer lists for the purpose of parking dimmers much like you can construct channel lists. Simply use the [+], [-], and [>] keys to construct a normal channel list and make a command to park them at their current or a specified level.

 **EXAMPLE:** To unpark dimmers in the Patch: Parked Dimmers or Stage displays:

(UNPARK) [DIMMER] [# list] [ENTER]


- or -

(UNPARK) [# list] [ENTER] (Unparks all dimmers

patched to the specified


channel list.)

If you do not specify a dimmer or channel list to unpark, the console uses a default list. In the Patch: Parked Dimmers subdisplay, the command unpatches the current parked dimmer (shown in reverse video):

 **EXAMPLE:** To unpark the current parked dimmer in the Patch: Parked Dimmers subdisplay:

(UNPARK) [ENTER]

In the Stage display, the same command unpatches **all** parked dimmers.

 **EXAMPLE:** To unpark **all** parked dimmers, from the Stage display only:
(UNPARK) [ENTER]

Note that **only dimmers can be parked**. Although you can select a group of dimmers to park by specifying their patched channel(s) in the Park command, the channels continue to read in the Stage display. When dimmers are parked, their corresponding **channels are not parked**. You can adjust the channel levels and the Stage display shows them at the new levels, but the actual lighting level on stage remains at the parked dimmer levels. If two dimmers are patched to the same channel and you park one of the dimmers, the other dimmer continues to be controlled by the channel level in the Stage display. Any cues, groups, or submasters that you record contain the channel levels that are shown in the Stage display, even if the dimmers assigned to some or all of the channels are parked at other levels.

? **BASIC RULE:** *Dimmers can be parked; channels cannot. You may use channels to make a dimmer list for the purpose of parking the dimmers, but only the dimmers are parked.*

? **BASIC RULE:** *Cues, groups, and submasters record channels, **not** dimmers. Channel levels are recorded as shown in the Stage display regardless of the parked status of any dimmers that are patched to them.*

Viewing Parked Dimmers

Whenever any dimmers are parked, an indication is given in the Stage display. In the Status Bar, “Dimmers Parked” appears in white, to the left of the “Next Cue” indicator. This is to remind you that dimmers may be “locked on” and cannot be taken out with the Grandmaster.

In the Patch: By Channel and Patch: By Dimmer displays, parked dimmers are shown with a pink “P:XX” in the “Level” column, where “XX” is the current parked level.

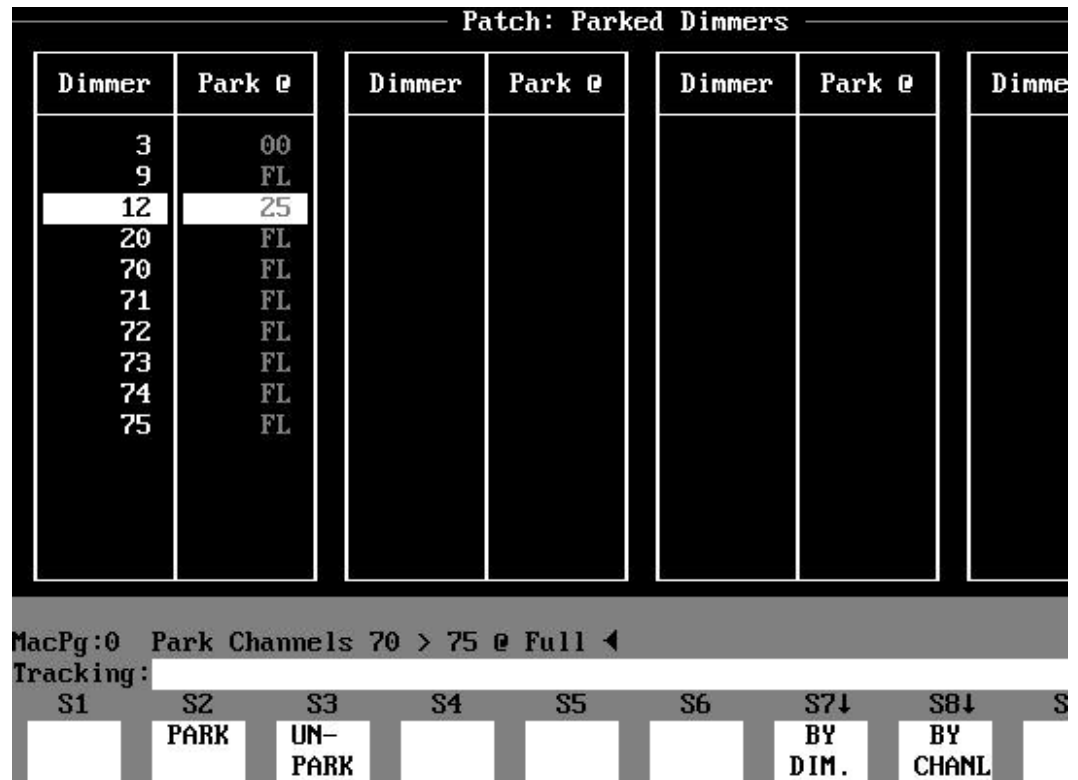


Figure 20.2, Patch: Parked Dimmers Subdisplay

To view a list of all parked dimmers, use the (PARK DISP.) soft key in the Patch display to reveal the Patch: Parked Dimmers subdisplay. There are two columns; the left column shows the dimmer number, and the right column shows the parked level. The **current** parked dimmer is shown in reverse video. This is the default dimmer in the Patch: Parked Dimmers subdisplay for patching and unpatching commands (when you do not specify a dimmer).


Uses for Parked Dimmers

Parked dimmers have a variety of applications. Their biggest advantage is that you can record cues, groups, and submasters live on stage without recording the parked dimmer levels. This allows you to use stage lighting circuits for work lights or rehearsal lights while you are recording cues. You can leave backstage lighting parked at a low level for backstage running lights. Some operators use parked dimmers to run the power supplies on their moving lights, so they don't worry about them accidentally going out during a cue. If you control your houselights with your console, you can park your aisle lights at a low level. These are just a few possible applications.


Automated Channels

You can designate any channels as Automated channels in the Patch display. Automated channels are not affected by the Grandmaster fader or the Blackout switch. An Inhibitive submaster can still control Automated channels, but a Bump button in Solo mode **does not** force Automated channels to zero. Use Automated channels to control automated equipment such as color scrollers, moving lights, etc. Automated channels should control the specific operation of the equipment while a standard control channel affects the intensity of the light. This separate control allows you to use the Grandmaster to bring down the intensity of lights without affecting their position or color setting.

You can use the command [GO TO CUE] [0] [ENTER] as a starting point for new cues because this command does not affect the levels of any Automated channels.

 **EXAMPLE:** To assign channels as Automated channels in the Patch display:

1. [# list] (AUTO CHAN)
2. (ON)

 **EXAMPLE:** To return Automated channels to normal channels in the Patch display:


1. [# list] (AUTO CHAN)
2. (OFF)

Automated channels are shown in purple in all displays. Automated channel levels still appear according to the normal color code to indicate their control status in the current cue.

All Automated channels belong to **Group Zero**. You can still assign Automated channels to any group at any level you wish. You can affect the levels of all Automated channels with any level setting command that uses Group Zero. This is useful for putting **all** Automated channels under control of the wheel.

 **EXAMPLE:** To place all Automated channels under control of the wheel:

[GROUP] [0] [ENTER].

 **HINT:** *If you assign Automated channels that control color scrollers to a submaster at a level of Full, you can use the sub fader to move through the colors. The same principle applies to the parameters of moving lights. Don't forget that any other levels from other subs or cues control channels on a "highest level takes precedence" basis.*

CHAPTER 21:

Macros

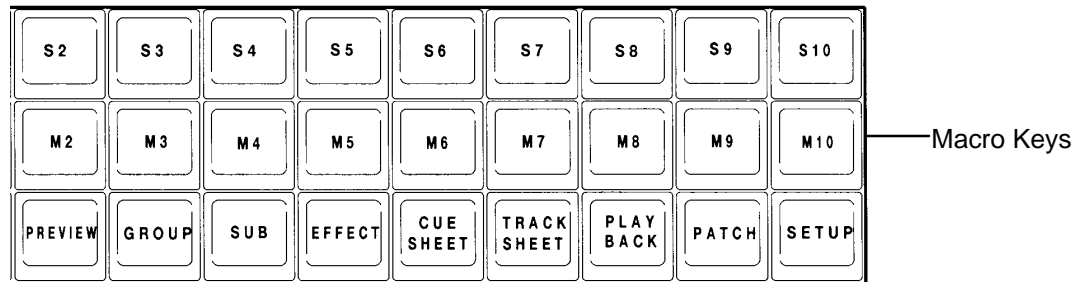



Figure 20.1, Macro Keys


A macro is a series of keystrokes that you record to perform a complex command with the press of a single Macro key. Macros are especially useful for executing command sequences that you repeat often. You can use a macro to go to cue zero, reload submasters, park or unpark channels or even set a certain "look" on stage.

Recording Macros

You can create a macro "live" by pressing the (REC. MACRO) soft key in the Setup or Stage display. A macro may contain both hard key and soft key keystrokes, but cannot record fader, Bump button or wheel functions. A macro may contain up to 128 keystrokes. You may "nest" macros by using another macro inside a macro, both executed with a single keystroke.

 **EXAMPLE:** To create and record macro 1 "live" to execute with [M1] key, in the Setup display:

1. (REC. MACRO) [1] [ENTER]
2. Enter keystrokes that make up the macro.
3. [M1] (Ends the Record Macro command.)

 **NOTE:** You can also end the Record Macro command by using the (REC. MACRO) soft key in the Stage and Setup displays.

 **EXAMPLE:** To create a Go To Cue 0 macro in the Stage or Setup displays:

1. (REC. MACRO) [M#] [ENTER] ("Recording Macro #"
flashes in Stage display.)
2. [GO TO CUE] [0] [ENTER]
3. Press same [M#] key.) (Ends recording of macro.
Flashing message stops.)
- or -
- (REC. MACRO



EXAMPLE: To create a Go To Cue 0 macro which also takes all Automated channels to zero, in the Stage or Setup displays:

1. (REC. MACRO) [M#] [ENTER]
2. [GO TO CUE] [0] [ENTER]
3. [GROUP] [0] [@] [ENTER]
4. Press same [M#] key.) (Ends recording of
macro.)
- or -
- (REC. MACRO


Macros are recorded literally as a series of keystrokes. When you record a level setting command such as [1] [>] [10] [@] [FULL], the macro will work in any display that accepts that command syntax. If you want to have the macro work only in a designated display, such as Stage, press the display key as the first keystroke in the macro.

Be aware that different displays can interpret the same keystrokes differently. For example, the command [12] [@] [5] [ENTER] has different results in the Stage and Patch displays. In the Stage display it sets channel 12 at 50%, while in the Patch display it patches channel twelve to dimmer 5. This is why you should sometimes start the macro with a display key.

When you start a new show, or clear the console memory, all macros are erased with the exception of macro 100. Macro 100 is always [GO TO CUE] [0] [ENTER] by default. You may record over macro 100, or any other previously recorded macro.

Macro Paging

There are ten gray macro keys, labeled [M1] - [M10], on the console top panel. The Encore has ten pages of macros available, each with ten macros per page, which allows you to record up to 100 macros. (See Table 20.1.) At any given time, a single page of macros is currently accessed by the macro keys. The current macro page is shown just to the left of the Command Line History.

 **EXAMPLE:** To change the current macro page to macro page 5, in the Setup display:

[MACRO PAGE] [5] [ENTER]

MACRO PAGE	0	1	2	3	4	5	6	7	8	9
MACRO KEY	Macro #	Macro #	Macro #	Macro #	Macro #	Macro #	Macro #	Macro #	Macro #	Macro #
[M1]	1	11	21	31	41	51	61	71	81	91
[M2]	2	12	22	32	42	52	62	72	82	92
[M3]	3	13	23	33	43	53	63	73	83	93
[M4]	4	14	24	34	44	54	64	74	84	94
[M5]	5	15	25	35	45	55	65	75	85	95
[M6]	6	16	26	36	46	56	66	76	86	96
[M7]	7	17	27	37	47	57	67	77	87	97
[M8]	8	18	28	38	48	58	68	78	88	98
[M9]	9	19	29	39	49	59	69	79	89	99
[M10]	10	20	30	40	50	60	70	80	90	100

Table 20.1, Macro Key Paging

Viewing Macros

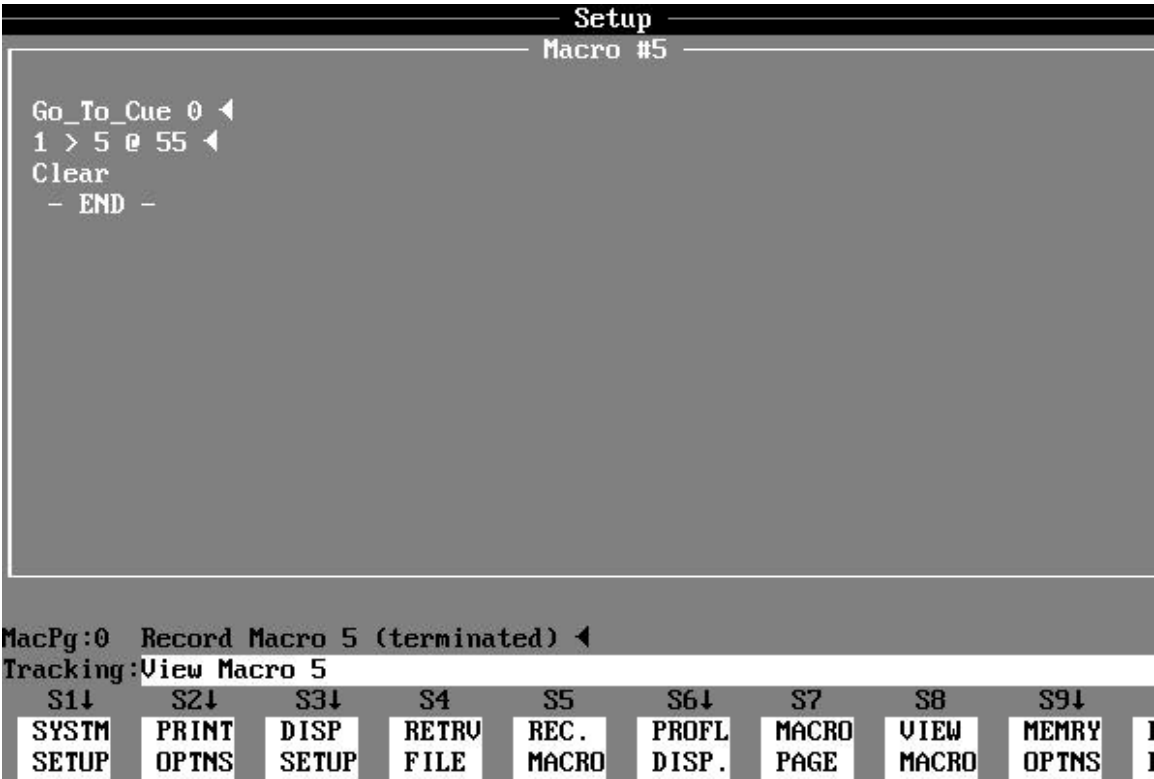



Figure 21. Macro Window

You can view the recorded contents (keystroke sequence) of any of the 100 macros by using the (VIEW MACRO) soft key in the Setup display. The (VIEW MACRO) keys opens a large aqua-colored Macro window that shows the contents of the selected macro as a sequence of keystrokes.

 **EXAMPLE:** To view the contents of macro 5, in the Setup display:
(VIEW MACRO) [5] [ENTER]

Once the Macro window is open, you can use the [NEXT] and [LAST] keys to view other macros.

CHAPTER 22:

Controlling Fade and Effect Rates with the Wheel

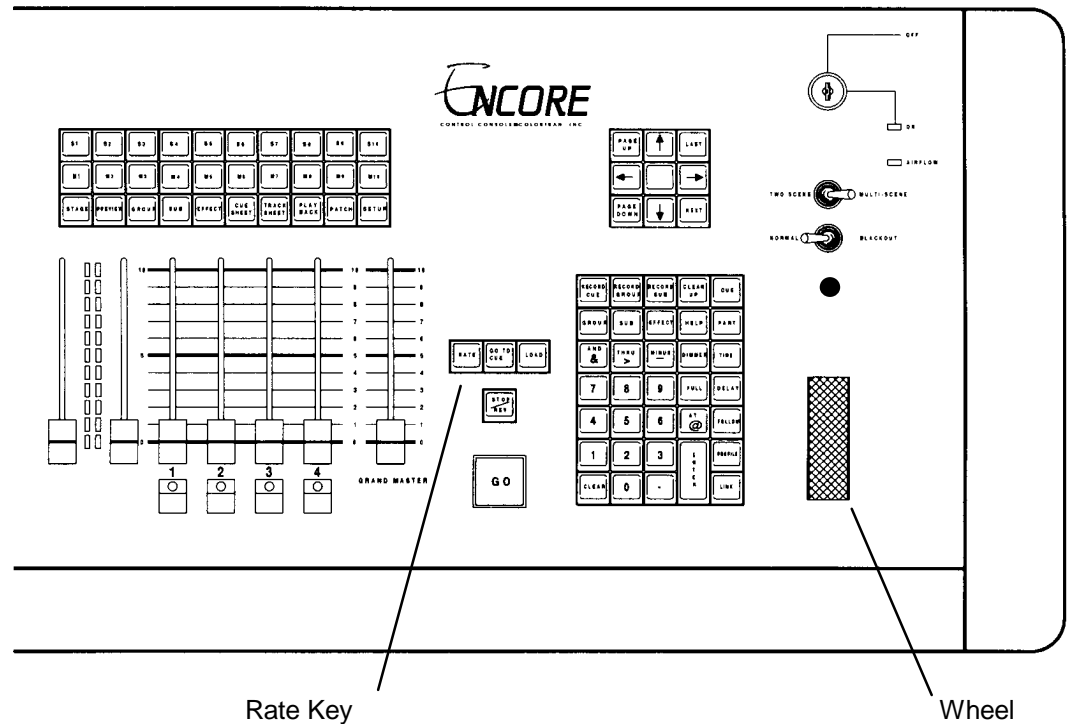



Figure 22.1 Wheel and Rate Key

When you are playing back cues on playback faders, you can use the [RATE] key to assign control of the cue fade rate to the wheel. You can also use the wheel to control the rate of effects running on submasters and playback faders. When you have rate control on the wheel, moving the wheel up increases the time of the fade (slows down the rate of the fade or effect). Moving the wheel down decreases the time of the fade (speeds up the rate of the fade or effect).

Changing Cue Fade Rates


While a timed cue fade is occurring on a playback fader, you can adjust the fade time by using the [RATE] key.

 **EXAMPLE:** To adjust the rate of **all** cue fades that are currently fading on playback faders:

1. [RATE] [ENTER]
2. Adjust rate with the wheel by increasing or decreasing fade time.
3. [CLEAR] (Releases rate control from the wheel.)


When you use the wheel as in the Example above, you increase or decrease the fade time of all active fades proportionally. When you release rate control with the [CLEAR] key, the adjusted fade times remain for the fades. You can readjust the rate by capturing rate control again in the same manner.

If there is more than one fade occurring at the same time, and you want to adjust the rate of selected cue fades, you can specify the playback fader numbers that contain the fades you want to control.

 **EXAMPLE:** To adjust the rate of cue fades that are fading on **specific** playback faders:


1. [RATE] [fader # list] [ENTER]
2. Adjust rate with the wheel by increasing or decreasing fade time.
3. [CLEAR] (Releases rate control from the wheel.)

Note that if you adjust the fade rate of a cue that has an effect fading in or out, the **fade rate** of the cue effect is adjusted along with the fade rate of the cue.

 **NOTE:** *Do not confuse the fade rate of a cue effect with the effect rate.*


Changing Submaster Effect Rates

While an effect is running on a submaster, you can adjust the effect rate with the [RATE] key.

 **EXAMPLE:** To adjust the rate of **all** effects that are currently running on submasters:

1. [RATE] [SUB] [ENTER]
2. Adjust effect rates with the wheel.
3. [CLEAR] (Releases rate control from the wheel.)

If there is more than one effect running on submasters at the same time, and you want to adjust the rate of selected effects, you can specify the submaster numbers that contain the effects you want to control.


 **EXAMPLE:** To adjust the rate of effects that are running on **specific** submasters:

1. [RATE] [SUB] [# list] [ENTER]
2. Adjust effect rates with the wheel.
3. [CLEAR] (Releases rate control from the wheel.)

When you release rate control with the [CLEAR] key, the adjusted effect rate remains for the effects on active submasters. If you bring the submaster level to zero, it "resets" the submaster and the effect rate is restored to the step timing assigned to it in the Effect display.


Changing Cue Effect Rates

When you want to control the rate of a cue effect, it is a special case because you need to control an effect that may be running on the same playback fader as a cue fade. For this reason, you must use the [EFFECT] key in your rate command.

 **EXAMPLE:** To adjust the rate of all effects that are running on playback faders:

1. [RATE] [EFFECT] [ENTER]
2. Adjust effect rates with the wheel.
3. [CLEAR] (Releases rate control from the wheel.)

If there is more than one cue effect running on playback faders at the same time, and you want to adjust the rate of selected cue effects, you can specify the playback fader numbers that contain the cue effects you want to control.

 **EXAMPLE:** To adjust the rate of cue effects that are running on **specific** playback faders:

1. [RATE] [EFFECT] [fader # list] [ENTER]
2. Adjust effect rates with the wheel.
3. [CLEAR] (Releases rate control from the wheel.)

The adjusted effect rate remains on cue effects until you readjust the rate again in the same manner.

? **HINT:** *If there are cues in your show that always require rate control, try recording a macro that places rate control on the wheel for those cues (or effects). Then assign the macro to the cue so you will always have rate control immediately available whenever you play back those cues that always require rate control.*

CHAPTER 23:

Load Key Operations

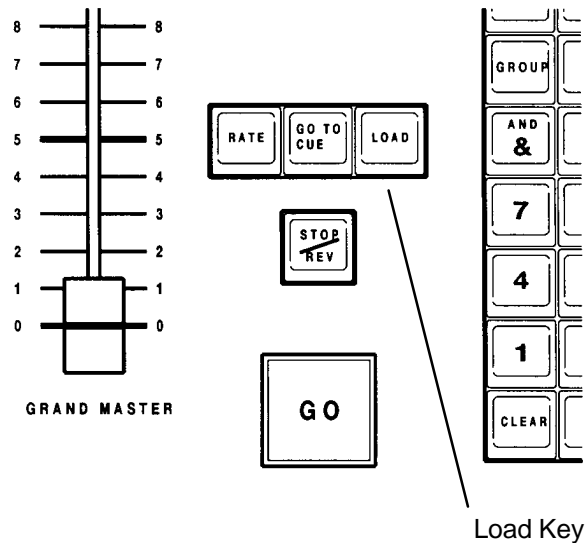


Figure 22.1, Load Key

Load Key

You can use the [LOAD] key to load existing items to submasters or Playback Faders. A submaster can be loaded with a cue, a group, or an effect. Playback Faders can have cues loaded to them.

There are two ways to execute load commands:

- ⚡ Aim and Load
- ⚡ Complete Command

Aim and Load: Press the [LOAD] key and the keys for the item(s) that you want to load, followed by [ENTER]. A message box appears on the screen instructing you to select the Bump button or Take Control button under the submaster or playback fader to which you want the item(s) loaded.



EXAMPLE: To aim and load:

1. [LOAD] [CUE, GROUP, or EFFECT] [#] [ENTER]
(Message window appears.)
2. Press the desired target Bump button or Take Control button.

Complete Command: Make a complete command that specifies the target submaster or playback fader. When you press the [LOAD] key, the soft keys change to reveal the (ON SUB) and (ON FADER) soft keys. Use these keys in your command before the [ENTER] key.



EXAMPLE: To make a complete command:

[LOAD] [CUE, GROUP, or EFFECT] [#] (ON SUB) [#] [ENTER]

- or -

[LOAD] [CUE] [#] (ON FADER) [#] [ENTER].

The advantage of the Aim and Load method is that it is intuitive and fast. The advantage of the Complete Command method is that it can be recorded as a macro.

Range Loading

You can choose to load a range of items in a single command, rather than loading each item individually. Simply specify a range of numbers after the [CUE], [GROUP], or [EFFECT] key in your command. The first item in the list loads to the target submaster or fader, and the remaining items load to the next higher numbered submasters or faders sequentially. You can use either method when range loading (Aim and Load, or Complete Command).

If your list of items is not numerically sequential, the items still load to a solid block of submasters or faders; there will not be “gaps” in the loaded submasters or faders.



EXAMPLE: Assume that you have a show with effects 1, 2, 3, and 5 created within it (no effect 4). To load the effects onto sequential sub faders:

[LOAD] [EFFECT] [1] [>] [5] (ON SUB) [1] [ENTER]

(Effects load on submasters 1 through 4, with effect 5 on submaster 4.)

Loading Cues to Submasters

When the Load command loads a cue to submaster, the sub type of the destination submaster automatically changes to Normal. Regardless of its current mode, any channel levels that were previously assigned to the Normal sub are replaced with all the channel levels of the cue. Only channel levels of a cue are loaded to a submaster - effects assigned to a cue are **not** loaded to the submaster. The timing associated with the cue is automatically assigned to the submaster Bump button as well.

If you load a multipart cue onto a submaster, the "end look", including all parts of the cue, load onto the submaster. The "look" of that submaster will be as if all cue parts are completed.



EXAMPLE: To load a cue to a submaster:

[LOAD] [CUE] [#] [ENTER] [press Bump button]

- or -

[LOAD] [CUE] [#] (ON SUB) [#] [ENTER]

When loading a range of cues to submasters, the cues are loaded to consecutive submaster numbers, starting with the first submaster indicated. Even if the range of cue numbers is not consecutive, the cues are loaded to consecutive submasters.



EXAMPLE: To load a range of cues to submasters:

[LOAD] [CUE] [#] [>] [#] [ENTER] (Press Bump button of starting destination sub.)

- or -

[LOAD] [CUE] [#] [>] [#] (ON SUB) [**first** sub #] [ENTER]

Loading Groups to Submasters

When the Load command loads groups to submasters, the sub type of the affected submasters automatically changes to Normal. Any channel levels that were previously assigned to the Normal sub are replaced with the levels of the group.




EXAMPLE: To load a group to a submaster:

[LOAD] [GROUP] [#] [ENTER] [press Bump button of destination sub]

- or -


[LOAD] [GROUP] [#] (ON SUB) [#] [ENTER]

When loading a range of groups to submasters, the groups are loaded to consecutive submaster numbers, the first group starting with the submaster indicated. Even if the range of group numbers is not consecutive, the groups are loaded to consecutive submasters.


 **EXAMPLE:** To load a range of groups to submasters:
[LOAD] [GROUP] [#] [>] [#] [ENTER] [press Bump button of destination sub]
- or -
[LOAD] [GROUP] [#] [>] [#] (ON SUB) [**first** sub #] [ENTER]

Loading Effects to Submasters

When the Load command loads an effect to a submaster, the sub type of the affected submaster is automatically changed to Effect. When the effects loaded to a submaster are edited after they have been loaded, the changes automatically update to the effect on the submaster when it is reset to zero.

 **EXAMPLE:** To load an effect to a submaster:
[LOAD] [EFFECT] [#] [ENTER] [press Bump button of destination sub]
- or -
[LOAD] [EFFECT] [#] (ON SUB) [#] [ENTER]

When loading a range of effects to submasters, the effects are loaded to consecutive submaster numbers, starting with the first submaster specified. Even when the specified effect numbers are not consecutive, the effects are loaded to consecutive submasters.

 **EXAMPLE:** To load a range of effects to submasters:
[LOAD] [EFFECT] [#] [>] [#] [ENTER] [press Bump button of **first** destination sub]

[LOAD] [EFFECT] [#] [>] [#] (ON SUB) [**first** sub #] [ENTER]

Loading Cues to Playback Faders


You can use the [LOAD] key to load cues to specific playback faders. When you load a cue to a playback fader, it becomes a manual fade, even if it is a

timed cue. The cue also does not initiate any follows or links, or change the cue number in the Next Cue register. Loading a cue to a playback fader with the [LOAD] key does not change the cue execution order with respect to what happens with the next press of the GO button. The [LOAD] key simply provides you with a way to add (or subtract) a cue look on a playback fader without changing your cue execution progress.


? BASIC RULE: *Loading a cue to a playback fader with the [LOAD] key does not change the cue number in the Next Cue register.*

? HINT: *If you would like to execute cues out of numeric sequence and initiate all of their attributes as well, try the Go To Link or Go To Clean Up command. These commands also change the cue in the Next Cue register. You can specify it as a manual fade, use its assigned time, or specify a different time as part of the command. (See Chapter 9, Playing Back Cues.)*

Note that a cue loaded to a playback fader with the [LOAD] key does not replace the stage look unless it is a Clean Up cue. Only hard levels in cues affect channels on the stage.

 **EXAMPLE:** To load a cue to a playback fader:
 [LOAD] [CUE] [#] [ENTER] (Press Take Control
 button of the destination fader.)
 - or -
 [LOAD] [CUE] [#] (ON FADER) [#] [ENTER]

When loading a range of cues to playback faders, the cues are loaded to consecutive playback fader numbers, starting with the first fader indicated. Even when the specified cue numbers are not consecutive, the cues are loaded to consecutive playback faders. If you attempt to load more than four fades at once, only the first four fades in the range are loaded.

 **EXAMPLE:** To load a range of cues to playback faders:
 [LOAD] [CUE] [#] [>] [#] [ENTER] (Press Take Control
 button of the destination fader.)
 - or -
 [LOAD] [CUE] [#] [>] [#] (ON FADER) [first fader #] [ENTER]



When loading multipart cues, you cannot specify individual parts. All parts are loaded for manual playback, each to a separate playback fader. If you do not wish to use a particular cue part, simply clear the fader with the Take Control button before you move the fader handle.

CHAPTER 24:


Selective Recording

Selective Recording of “New” Items


When you record cues, groups, or subs, you may want to record only a specified list of channels rather than all channels that are active on stage. There are two ways to define the channels that you want to record:


-  Specify the channels that you want to **include in** the Record command.
-  Specify the channels that you want to **exclude from** the Record command.

? BASIC RULE: *Whenever you execute a Record command, the console assumes that you want to record live levels for **all** channels, unless you specify a different list of channels, or specify a list of channels to be excluded from the list of all channels.*


 **EXAMPLE:** Assume channels 1 - 40 are at 50% on stage. To record only channels 1 - 20 as submaster 5:
[1] [>] [20] [RECORD SUB] [5] [ENTER] (Does not record channels 21 - 40.)

You can obtain the same result as in the Example above by using the [MINUS] key to specify a list of channels to be excluded from a record command.


 **EXAMPLE:** Using the example above, to record only channels 1 - 20 as submaster 5:
[-] [21] [>] [40] [RECORD SUB] [12] [ENTER] (Excludes channels 21- 40.)

 **EXAMPLE:** To **exclude** channels 1 - 20, and record all other channels as submaster 6:
[-] [1] [>] [20] [RECORD SUB] [6] [ENTER]

You can also specify submasters and groups as the channel levels that you don't want to record.


 **EXAMPLE:** To record a cue (group, or submaster) without recording the channels in submasters 5 - 10:

[**-**] [**SUB**] [**5**] [**>**] [**10**] [**RECORD CUE**] [**#**] [**ENTER**]

 **EXAMPLE:** To record group 3 without any of the channel levels in the channels that are assigned to subs


1 - 12:

[**-**] [**SUB**] [**1**] [**>**] [**12**] [**RECORD GROUP**] [**3**] [**ENTER**]

 **NOTE:** *In the example above, any tracking levels that exist in previous cues are not excluded by the [**MINUS**] key command.*

Selective Overwriting of Pre-existing Items (Updating)

When you use the [**RECORD CUE**], [**RECORD GROUP**], or [**RECORD SUB**] hard keys in a non-selective recording command, you completely replace the contents of the pre-existing item. With selective recording, only the specified channels are updated to their current stage level in a pre-existing cue, group, or submaster. All un-addressed channels in an existing item remain unchanged after a selective recording command.

 **EXAMPLE:** Assume sub 1 is channels 1 - 10 at Full, and channels 1-10 are at 50% on stage:

[**1**] [**>**] [**5**] [**RECORD SUB**] [**1**] [**ENTER**] (Sub 1 channels 1 - 5 set to 50%, and

channels 6 - 10 remain at Full.)

ENCORE USER GUIDE

PART IV: **Appendices**

APPENDIX A:	Maintenance And Customer Service
APPENDIX B:	Soft Key Layout Chart
APPENDIX C:	Hand Held Remote
APPENDIX D:	MIDI Interface
APPENDIX E:	ColorNet™ Remote Video
APPENDIX F:	Encore Console Specifications
APPENDIX G:	Auxiliary Monitor (Dual Video Option)

APPENDIX A:

Maintenance and Customer Service

Upgrading Software

The Encore console has the ability to have new versions of software loaded into it from floppy disk, like upgrading software on a personal computer. The disk must be an Encore Operating System disk in order for the procedure to function correctly. Your console was shipped with an Operating System disk that has a copy of the original software version that was loaded in it when it was tested at the factory.

The entire upgrade procedure takes less than a half hour, but it is recommended that you do the upgrade on a day that does not require use of the console.

? **HINT:** *The upgrade procedure can take 15 minutes or more, and involves turning off power to the console. Therefore, the upgrade should be done when the console is not being used to control lights.*

You may follow the same procedure to “downgrade” to an earlier version of software, if you wish. Any show files that you have saved on disk from earlier software versions will still work with later versions of software, although they will not contain any information for the new features in the newer software. Shows that are recorded on a later version of software may not be compatible with earlier versions of software, however.


? **BASIC RULE:** *Show files are “upward compatible” for new software, but not “downward compatible” for old versions of software.*

To initiate a software upgrade, go to the Setup display. Before you start an upgrade, you should clear the memory of the console. You can do this by doing a “Hard Clear” (described in Chapter 13, *Memory*).

Under the (MEMRY OPTNS) soft key, there is another soft key labeled (UP-GRADE). When you press the (UP-GRADE) key, a message appears that warns you that you are attempting to change your operating system. This is part of a series of messages that come up to protect you from accidentally starting an upgrade procedure. The [ENTER] key will advance you through this series of messages, while the [CLEAR] key will abort the upgrade procedure.

After the console has recognized that you have inserted a valid Operating System disk, you will be prompted to “cycle power on the console.” Simply turn the keyswitch to “Off”, wait a few seconds, and turn it back to “On”. At this point the new software begins loading. The entire process should take about 10 to 15 minutes, depending on the model of your console. **You must not turn off the console or unplug power from it during this process.** The monitor screen will track the progress of the new software loading. The screen will show verification of the existing read-only-memory (ROM) allocation; then it will begin to overwrite the existing ROM. When this process is complete, a message appears that indicates that the upgrade was successful, and instructs you to turn the console off, then back on. Once again, simply turn the keyswitch to “Off”, wait a few seconds, and turn it back to “On”.


At this point you can verify that you have successfully loaded new software by observing the version number shown at the top of the Setup display.

 **NOTE:** *If you should experience a power failure or other problem that causes a malfunction during the upgrade procedure, turn the keyswitch to “Off”, wait a few seconds, and turn it back to “On”. If you cannot restore the console to normal functioning, call Colortran Field Service at (800) 959-6004 for further instructions.*


Memory Test

You can perform a test of the Random Access Memory (RAM) in the console by using the (TEST MEM) soft key, under the (MEMRY OPTNS) soft key in the Setup display. The only reason to run this test is because the console appears to be experiencing memory corruption. Usually memory corruption occurs because the RAM battery is dead, so you may also want to check that it is OK. **This test will delete all show information in memory**, so you should save your show to disk before performing a memory test. There is a warning that requires you to verify that you want to run the memory test.

While the test is running, a box shows you its progress. You will see two groups of numbers: one on the left, and one on the right. The numbers on the left signify kilobytes of memory being tested, and the numbers on the right increment every time that the full memory of the console has been tested. The memory test will run until a memory error is encountered. If you leave the console alone for a while and come back, you will see how many full memory tests have run without encountering any memory errors. If the memory test has stopped, it means that a memory error has occurred; you should call Colortran Field Service if this occurs. Usually 10 to 20 successful passes at the full memory test is conclusive that your memory is OK. Once you start a memory test, you can only stop it by turning off the console with the keyswitch.


 **EXAMPLE:** To test the Random Access Memory (RAM) in the console from the Setup display:


1. Save your show to disk if you wish to save the show information.

 **WARNING!** *This procedure will erase all information in the console's memory!*

2. (MEMRY OPTNS)
3. (TEST MEM) (Warning message displayed.)
4. [ENTER] (Memory test runs indefinitely.)
5. Turn off keyswitch. (Ends memory test.)


Replacing AC Power Fuses

 **WARNING!** *The Encore contains high voltage (120 or 240 VAC) which can cause injury or death. Be sure to unplug the console from its AC power source before performing any maintenance inside the console.*

 **CAUTION:** *You must replace fuses with new fuses of the proper type and rating, or else your Encore console can be damaged. The only brand of fuse that should be installed in the Encore is Wickman-Werke model 19195. Any other kind of fuse will compromise the UL (Underwriter Laboratories) safety compliance.*

1. Obtain the correct replacement fuse, which can be purchased from your Colortran dealer as part # 29-00039 (4 Amp 250 Volt slow blow).
2. Remove the AC power cord from the Encore Back Panel to access the fuse holder, which is built into the AC power connector.
3. Use a small screw driver to pry open the fuse holder. Remove the bad fuse from the fuse holder, and snap the new fuse gently into place.
4. Slide the fuse holder into the Back Panel until you feel it snap into place.

Replacing the RAM Backup Battery

 **CAUTION:** *Modern electronics can sometimes be permanently damaged by just a tiny amount of static electricity, an amount much smaller than you can feel! To protect your Encore from damage, it is recommended that you use a grounding wrist-strap connected to the console chassis whenever you remove the computer cover.*

1. Obtain the correct replacement battery, which can be purchased from your Colortran dealer as part # 35-00008 (3 VDC 560 mA/hr Lithium). You can also purchase a battery from your local electronics retailer (Panasonic model CR2354, or equivalent).
2. **First, unplug the console from the AC power source!**
3. Place the console on a flat sturdy surface.
4. Using a flat blade screwdriver, loosen the large screws on each side of the console. (The screws are spring loaded "captive" screws - they cannot fall out.)
5. Lift the front of the top panel, and raise it to its fully upright position. Support the top panel with the "hood prop" (located inside the edge of the top panel) by inserting the end of the hood prop into the hole provided in the edge of the chassis.

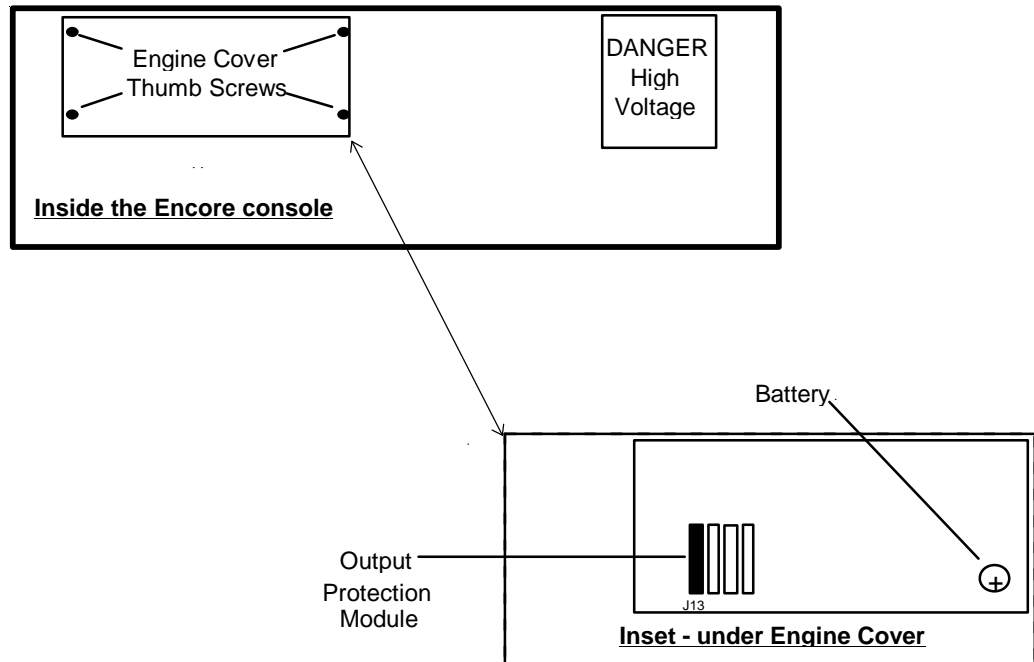


Figure A-1, Inside the Console

6. Remove the 4 hand screws from the Engine cover as shown. These screws are not captive. Take care not to lose the lockwashers on the hand screws. (The lockwashers are required to maintain the UL safety compliance.) Locate the battery as shown.

7. The easiest way to remove the battery from under its spring-clip is to first place a small flat blade screwdriver in the notch in front of the battery, and lift the front edge of the battery above the lip of the battery holder.

Next, place another small flat-blade screwdriver in the notch in back of the battery, and push the battery forward, out and over the front lip of the battery holder.

8. Make sure that the "+" side of the new battery is facing up, and then slide the new battery into place under the spring-clip.

9. Replace the Engine cover, place the hood prop back into its holder, close the top panel and tighten the captive screws on each side of the console.

Replacing the Output Protection Module

1. See Figure A-1. First, perform steps 1 - 5 in the battery replacement procedure above to access the Output Protection Module under the Engine cover.

2. Locate the Output Protection Module as shown. Gently remove the cable assembly plug from its connector on the top edge of the Module. Mark the cable, if necessary, to remember which connector it attaches to.

3. The easiest way to remove the Output Protection Module is to hold it with your left hand, then use your right hand to pull the front spring tab toward you to release the front of the Module.

Tip the front of the Output Protection Module slightly to the left so it clears the front spring tab.

Next, use your right hand to push the rear spring tab away from you to release the rear of the Output Protection Module. Tip the Module to the left and lift it out.

4. To install the new Output Protection Module, orient it so that the gold-edge contacts face down, and so the component side of the Module faces to the right.

5. With the Output Protection Module tipped the left, place the gold-edge contacts firmly down into the slot at connector J13. Now tip the Module to the right and snap it into place. Check to be sure that the Module is held properly behind both the front and rear spring tabs.

6. Install the connector plug back onto the proper connector, on the top edge of the Output Protection Module.
7. Replace the Engine cover, place the hood prop back into its holder, close the top panel and tighten the captive screws on each side of the console.

APPENDIX C:

Hand Held Remote

This appendix outlines how the Hand Held Remote (HHR) communicates with an Encore console. This appendix also describes the operation of the HHR within the Encore operating software.

The optional Hand Held Remote is a very useful device. It unchains you from the console and allows you to stand on stage and call up and check lights on the move, making for quick setup and focus. With the HHR, you can access dimmers directly, regardless of the patch, and move through dimmer or channel checks quickly and effortlessly. The four-line backlit LCD display allows you to verify your keystrokes, even in dark locations. For more information about the HHR, or to order an HHR for your Encore console, please contact:

✂✂ Colortran Customer Service at (800) 959 7999.

Protocol

The Encore Hand Held Remote connector port conforms to the following protocol:

- ✂✂ EIA RS-422 standard
- ✂✂ Baud Rate: 9600
- ✂✂ Parity: Even
- ✂✂ Data Bits: 7
- ✂✂ Stop Bits: 1
- ✂✂ Does not support Xon/Xoff

Pinout Information

The following chart shows the functions of the pins on the 6-pin Neutrik XLR-type connector on the console (female connector) and the HHR (male):

Belden 9830 Pairs	Cable	Function at Console	XLR Pin Number	Function at HHR
1st Pair		Ground	1	Ground
		+12 VDC out	2	+12 VDC in
2nd Pair		- Receive Data	3	-Transmit Data
		+ Receive Data	4	+ Transmit Data
3rd Pair		- Transmit Data	5	-Receive Data
		+ Transmit Data	6	+ Receive Data

Figure C-1 Pin-out Chart for Hand Held Remote

The maximum cable length that the Encore can support for a HHR is 1000 feet, including all connecting cables and permanent wiring (does not apply to the wireless version).

Functions

When the Encore console receives a character signal through its Hand Held Remote port, the console immediately goes to the Stage display and interprets the character signal as if the corresponding key was pressed on the console.

? **BASIC RULE:** *The HHR only works live, so the console always changes to the Stage display when you use the HHR, unless the console is in the Playback display.*

✍ **NOTE:** *The Go and Stop/Reverse commands do not force the console into the Stage display.*

All commands from the HHR appear in the Encore Command Line, after "(HHR Remote):", an indicator that lets you know that this command is originating from the HHR.

✍ **EXAMPLE:** To enable and disable the HHR in the Setup display:

1. [SYSTM SETUP] (Reveals the System Setup soft keys.)
2. [HAND-HELD] (Hand Held Remote toggles ON or OFF.)

If the HHR is not plugged into the console at the time you enable it, you get an error message that tells you that the HHR was not detected. The HHR is enabled, even if it is not detected, so that you can leave it enabled and plug in the HHR later.

The Encore Hand Held Remote port receives keystroke codes in particular order to make up commands to be executed by the console. Generally speaking, commands at the HHR are made the same way that they are at the console in the Stage display. All commands must be terminated by the [ENTER] key, which sends the command to the processor for execution. The exception to this is single-keystroke commands that do not require [ENTER], as follows:

⚡⚡ [GO]
⚡⚡ [STOP/REV]
⚡⚡ [CLEAR]
⚡⚡ [NEXT]
⚡⚡ [LAST]
⚡⚡ [UP]
⚡⚡ [DOWN]

Because the HHR uses the console Command Line, the HHR can start a command that can be finished by the console operator, and vice-versa. All of the keys on the HHR have the same function as the like-named keys on the console. The only exceptions are the [UP] and [DOWN] keys on the HHR which mimic the action of the wheel on the console. See the table at the end of this appendix for a list of all keys and their functions.

Hand Held Remote Display: The HHR display is a backlit LCD so you can see information when you are working in dimly lit areas that are common in theatrical venues. The LCD has four lines of information:

⚡⚡ **1st line** = Current **Stage Cue** (or captured channel numbers)
⚡⚡ **2nd line** = **Next Cue** in the execution list (or captured channel levels)
⚡⚡ **3rd line** = **Last command** that was executed (Command Line History)
⚡⚡ **4th line** = **Current Command Line**

If there is more information in the channel list or in the Command Line than can be shown on the LCD, you can use the [LAST] and [NEXT] keys (like the Arrow keys on the console) to move the information that is displayed.

Dimmer Check Mode: When you address a dimmer using the Dimmer key, you place the console in Dimmer Check mode. The command syntax for starting a Dimmer Check is:

[DIM] [#] [@] [level] [ENTER]

The HHR LCD shows the dimmer number and level and says, "DIMMER CHECK" to indicate that the console is in Dimmer Check mode. The level of the dimmer is controlled by the wheel at the console, and by the [UP] and [DOWN] keys on the HHR. By pressing the [NEXT] and [LAST] keys, you

can cycle through the dimmer list, one dimmer at a time. To release Direct Dimmer Control, press the [CLEAR] key.

Captured Channels: When you have captured channels under wheel control, the channels show up on the HHR LCD with their current levels shown beneath them. These levels can be adjusted with the [UP] and [DOWN] keys, or by the same kind of commands that you use at the console (e.g., [@] [level] [ENTER]). If the channel list is too long to be viewed all at once, you can use the [LAST] and [NEXT] keys (like the Arrow keys on the console) to move the information that is displayed.

Hand Held Remote Keys and Their Functions

HHR Key	Description	Example
. (decimal)	Decimal point	
AND (+)	Used to create channel lists.	[#] [+] [#]
AT (@)	Assigns a level in a level setting command. @ means "at a level of".	[1] [>] [10] [@] [50]
CLEAR	Backspaces through a partially complete command or releases captured channels from wheel control.	
CUE	Begins a cue editing command or uses a cue as a group.	[CUE] [#] [@] [level] [ENTER]
DIM	Begins Dimmer Check command.	[DIM] [#] [@] [level] [ENTER]
DOWN (wheel)	Lowest the level of captured channels, or of a dimmer while in Dimmer Check mode.	
ENTER	Executes a command, or captures all active channels under wheel control.	
FULL	Sets an item to its maximum level.	[#] [@] [FULL] [ENTER] -or- [#] [FULL] [ENTER]
GO	Starts the next cue in the cue list, or resumes stopped fades (no [ENTER] is necessary).	
GO TO CUE	Begins a Go To Cue command.	[GO TO CUE] [#] [TIME] [#] [ENTER]

GROUP	Sets a Group at a specified level.	[GROUP] [#] [@] [level] [ENTER]
LAST ?	Selects the last item in a channel or dimmer check, or scrolls contents LCD display.	
MINUS (-)	Used to create channel lists.	[#] [>] [#] [-] [#]
HHR Key	Description	Example
NEXT ?	Selects the next item in a channel or dimmer check, or scrolls contents of LCD display.	
REC CUE	Begins a Record Cue command.	[REC CUE] [#] [TIME] [#] [ENTER]
REC GRP	Begins a Record Group command.	[REC GROUP] [#] [TIME] [#] [ENTER]
REC SUB	Begins a Record Submaster command.	[REC SUB] [#] [TIME] [#] [ENTER]
STOP/REV	Stops all active fades, or goes to the previous cue in a 2 second fade (no [ENTER] is necessary).	
SUB	Begins a submaster editing command or uses a sub as a group.	[SUB] [#] [@] [level] [ENTER]
THRU (>)	Used to create channel lists.	[#] [>] [#]
TIME	Used in cue and sub editing or Go To Cue commands.	[CUE] [#] [TIME] [#] [ENTER]
UP (wheel)	Raises the level of captured channels or of a dimmer while in Dimmer Check mode.	

APPENDIX D:

MIDI Interface

Introduction to MIDI




MIDI (Musical Instrument Digital Interface) is a communication standard language designed to allow electronic musical instruments to share performance information. MIDI has also emerged as a format for exchanging playback commands between many types of non-musical performance devices, such as your Encore lighting control console.

All Encore consoles can receive and send MIDI commands. You can use these commands to remotely select and execute Encore cues, trigger macros, and control submaster and channel levels. Conversely, the Encore can use these commands to trigger external MIDI events.

There are two distinct sets of MIDI messages recognized by the Encore. The first set is the standard set of MIDI commands used by most musical devices. For the Encore, this includes the Note-on and Note-off commands, level and pitch bend information, program changes, as well as sequence-type "Go" and "Stop" commands.

The second set of MIDI messages recognized by the Encore is the MIDI Show Control (MSC) commands, a subset of MIDI, used for synchronizing a wide variety of performance devices. The Encore recognizes Show Control commands such as "Go", "Stop", "Resume", "Load", etc. When using the Encore MIDI interface, keep in mind that the standard MIDI commands are a distinctly different set of commands than MIDI Show Control messages. This is why the MIDI Show Control commands only work with control devices that have MSC implementation.


You connect the Encore to other MIDI devices via standard MIDI cables. There are three MIDI connector ports located on the console back panel. The three MIDI connectors are:

 IN	= Receives MIDI commands.
 OUT	= Sends MIDI commands.
 THRU	= Passes through any commands received at the IN port.

The THRU port allows the Encore to participate in a communication chain of multiple MIDI devices, without entering additional commands of its own into the data stream.

Enabling MIDI

You must enable the Encore MIDI control interface before any commands can be sent or received.

 **EXAMPLE:** To enable MIDI control in the Setup display:

- 1. (SYSTM SETUP)
- 2. (MIDI CNTRL) ("Device #" appears in MIDI Control field.)

When you enable MIDI control, the MIDI Command History window appears in the Playback display, just above the Playback Fader Boxes. The window shows the last two received MIDI commands in the RCV column, and shows the last two transmitted commands in the XMT column. MIDI control may be enabled or disabled at any time during console operation.

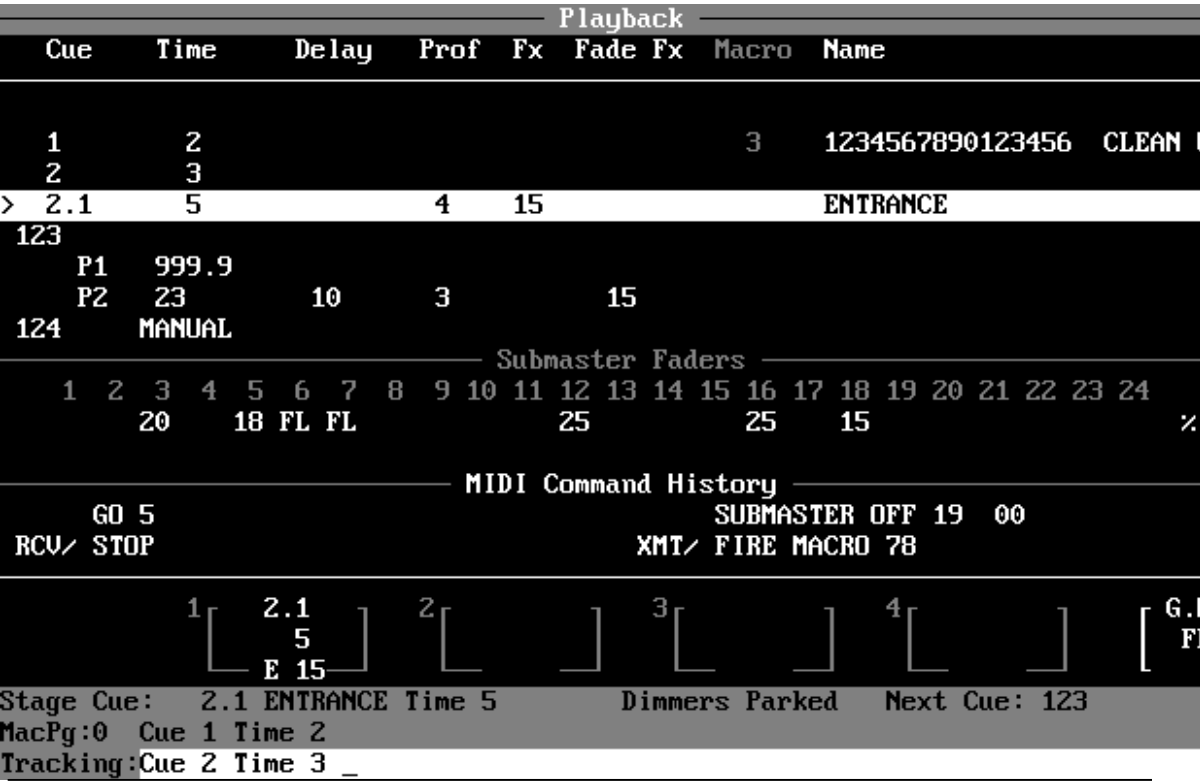


Figure C-1 MIDI Command History Window

You can use the (MIDI DEV #) soft key (available under the (SYSTM SETUP) soft key in the Setup display) to set the MIDI channel device number. Since Standard MIDI messages are transmitted only when the device number is set to any of the first 16 channels, you should set the MIDI channel device number from 1 - 16 when you want to use Standard MIDI messages. For the Encore to communicate with another device, the two devices must be set to the same channel.


When using MSC messages, you can assign each device an individual identification number from 0 - 111. Only MIDI Show Control Messages will be supported if you choose a device number greater than 16.

Using Standard MIDI Messages

The Encore recognizes a selected set of standard MIDI incoming messages that correspond to pre-determined lighting control parameters. These incoming messages allow you direct MIDI control of Encore submaster levels and channel levels, as well as selection and triggering of cues and macros.

Certain Encore controls and commands transmit pre-determined MIDI messages. These outgoing messages allow you direct MIDI control of notes and velocities via the submaster Bump buttons and the submaster faders. (Sequence control commands such as Go and Stop are not transmitted as standard MIDI messages, but are transmitted in MSC format only.)

Standard MIDI commands include data messages and general system messages. Data messages must include a destination MIDI channel number from 1 - 16, whereas system messages are transmitted to all MIDI channels regardless of which channel originated the message. If you set the Encore device number above 16, no standard MIDI data messages can be sent or received, and only MIDI system messages and MSC commands are recognized.

 **NOTE:** In lighting control terminology, the term "channel" refers to a control output. In MIDI terminology, "channel" is the device address. In this appendix, the MIDI device address is referred to as the "MIDI channel". The single word "channel" refers to an Encore control output.

Sub#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
MIDI Note #	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Musical Note	C2		D2		E2	F2		G2		A2		B2	C3		D3		E3	F3		G3		A3	

Sub#	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
MIDI Note #	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58
Musical Note	C4		D4		E4	F4		G4		A4		B4	C5		D5		E5	F5		G5		A5	

Table D-1, Submaster-to-MIDI Note Number Mapping*

*Note that submasters 25 - 48 only apply to Encore 48/96, XL, and XL/2 models.

Transmission Of Standard MIDI Messages. Each of the Encore submasters corresponds to an individual MIDI note number, beginning with MIDI note number 14. (See Table D-1.) Note that the lowest musical

notes are beyond the range of many MIDI controllers, and are not used by the Encore. The following MIDI commands are transmitted by pressing the submaster Bump buttons:

Bump Button Mode	Description of MIDI Command
On or Solo	<ol style="list-style-type: none"> 1. Transmits "Note On" command and its designated MIDI note number, followed by a "Note Off" command when the button is released. 2. The maximum MIDI velocity level of 127 is transmitted.
Off (Bump disabled)	<ol style="list-style-type: none"> 1. Transmits Note On command and its designated MIDI note number. 2. The velocity is determined by the physical position of the submaster fader. The fader output is scaled so that levels from zero to Full correspond to MIDI velocities from 0 - 127.
Toggle	<ol style="list-style-type: none"> 1. Transmits a sustained Note On command. Each button press alternately transmits a Note On command with a velocity of 127 or Note Off with a velocity of zero.

Reception of Standard MIDI Messages. The following standard MIDI message commands are recognized by the Encore:

MIDI Data Messages Recognized by the Encore

Command Name	Hexa-decimal Code	Description of Response by the Encore
Note On	0x90	<ol style="list-style-type: none"> 1. Controls a specific sub and its level. The MIDI note number corresponds to the submaster number. MIDI note numbers 14 - 37 control submasters 1 - 24 respectively. See Table C-1 for submaster-to-note mapping. 2. MIDI note numbers 38 - 61 control submasters 25 - 48 in the Encore 48/96 and XL models. 3. MIDI velocity determines the submaster level. A velocity of zero sets the submaster level to zero. A maximum MIDI velocity of 127 sets the submaster to Full. Timed fades for submasters must be programmed at the console.
Note Off	0x80	<ol style="list-style-type: none"> 1. Returns submaster to the level of its submaster fader. 2. MIDI note numbers 14 - 37 control submasters 1 - 24. MIDI note numbers 38 - 61 control submasters 25 - 48 in the Encore 48/96 and XL models. See Table C-1. 3. MIDI velocity value is ignored.
Polyphonic Level	0xa0	<ol style="list-style-type: none"> 1. Selects individual channels and levels. The MIDI note number specifies the channel, and the pressure value specifies the channel level. 2. MIDI note numbers correspond directly to channel numbers; note number 1 controls channel number 1, etc.

Pitch Wheel	0xe0	<ol style="list-style-type: none">1. Executes a specific cue. A maximum downward bend (a MIDI data value of zero) triggers cue 0, progressing to cue 999.9 as the bend value increases.2. The specified cue may be comprised of a three digit number and one decimal digit.
Program Change	0xc0	<ol style="list-style-type: none">1. Triggers a macro or a Go command.2. A MIDI program change of zero executes a Go command.3. A program change of 1 - 100 triggers the Encore macro of the same number.

MIDI System Messages Recognized by the Encore

Command Name	Hexa-decimal Code	Description of Response by the Encore
Song Select	0xf3	<ol style="list-style-type: none">1. Loads a cue number into the console's Next Cue register.2. The cue range is restricted to integer values only, from 0 - 127.3. The loaded cue is executed with the next Go command, either from a MIDI command or by pressing the GO button.
Start	0xfa	Executes an Encore Go command.
Stop	0xfc	<ol style="list-style-type: none">1. Pauses execution of running cues.2. Unlike the [STOP/REV] key on the Encore, a MIDI Stop command does not execute a reverse fade to the previous cue when no cues are currently running.
Resume	0xfb	Resumes execution of any paused cues.
System Reset	0xff	Executes a Go To Cue 0 command. Cue 0 is the standard blackout cue.

Using MIDI Show Control Messages

In addition to standard MIDI commands, the Encore sends and receives specialized commands in MIDI Show Control (MSC) language. For MSC messages to be recognized by the Encore, the transmitting MIDI device must specify one of two MSC command formats:

- ✂✂ **Lighting - General Category** (hexadecimal code 0x01)
- ✂✂ **All Types** (hexadecimal code 0x7f)

The transmitting MIDI device ID must either match the device ID assigned to the Encore, or must have an "All Types" device ID (hexadecimal code 0x7f). MSC group IDs are not supported by the Encore.

The Encore supports cue numbers with one decimal digit to the right of the decimal point. Any cue digits lower than the first decimal digit are ignored by the console.

Transmission of MIDI Show Control (MSC) Messages. The following Encore controls transmit specific MSC commands:

Encore Control	Description of Transmitted MSC Command
GO Button	Transmits an MSC "Go Cue #" command if no cues are paused, or transmits an MSC "Resume" command if there are paused cues.
[STOP/REV] Key	Transmits an MSC "Stop" command if any cues are running, or transmits a 1 second "Timed Go" command if no cues are running. The "Timed Go" command executes in conjunction with a "go to" command, which executes the "Reverse" function of the [STOP/REV] key when no cues are running.
[Go To Cue] Key	Transmits an MSC "Timed Go" command, along with the specified cue and fade time. An Encore Go To Link command executes an MSC "Go Cue #" command.
Macro Keys	Transmits an MSC "Fire Macro" command, along with the corresponding macro number. The command is transmitted by pressing a macro key, but is not transmitted by a macro within a cue.

Reception of MIDI Show Control (MSC) Messages. The following MSC commands are recognized by the Encore:


MSC Command Name	Hexa-decimal Code	Description of Response by the Encore
Go Cue #	0x01	<ol style="list-style-type: none">1. Starts execution of a cue, or resumes a paused cue.2. If no cue is specified, the command executes the cue in the Encore Next Cue register.3. If a cue is specified, the current stage cue is entered into the Encore "link stack" and the specified cue is executed. (For more information on the link stack, see the Link Stack topic later in this appendix).
Stop	0x02	<ol style="list-style-type: none">1. Pauses all running cues.2. If a cue number is specified, the command is ignored because the Encore does not support simultaneous paused and running cues.
Resume	0x03	<ol style="list-style-type: none">1. Resumes paused cues.2. If a cue number is specified, the command is ignored because the Encore does not support simultaneous paused and running cues.
Timed Go	0x04	<ol style="list-style-type: none">1. Starts a cue after a specified delay time.2. Delay times longer than 1000 seconds are reduced to 1000 seconds.
Load	0x05	<ol style="list-style-type: none">1. Loads a specified cue into the Encore's Next Cue register.2. The cue may then be executed by another MIDI command, or by pressing the console GO button.
Fire	0x07	<ol style="list-style-type: none">1. Triggers a macro or starts a cue. A parameter value of zero executes an Encore Go command.2. A value from 1 - 100 executes the corresponding macro.
All Off	0x08	<ol style="list-style-type: none">1. Executes the Encore blackout function the same as using the Blackout switch.2. Channels designated as Automated channels are not affected by this command.3. The "All Off" command is different from the Encore Go To Cue 0 blackout executed by the "Go Off" MSC command. The "All Off" blackout does not affect the internal channel levels, and can be restored with the MSC "Restore" command. Toggling the Blackout switch also restores channel levels.
Restore	0x09	Cancels the "All Off" command.
Reset	0x0a	Executes the Encore Go To Cue 0 command (blackout cue).
Go Off	0xb	Executes the Encore Go To Cue 0 command (blackout cue).

Link Stack. Encore consoles use a "link stack" to facilitate iterative looping and subroutine calls. Iterative looping occurs when a cue contains a link to an earlier cue along with a link repetition count. Subroutine calls occur when a cue contains a link to a later cue. MIDI commands that specify a cue number cause the pre-existing Stage Cue to be "pushed" onto the top of the link stack. Go commands invoke subroutines which then return to the original cue sequence.

Go To Cue. A "Go To Cue" command is used to "get to" the end look of a cue out of sequence without initiating follow, effect, profile, or other assigned cue parameters. The default time for a Go To Cue command is one second, instead of the assigned cue fade time. The purpose of the Go To Cue command is to bring channels to the levels they would have obtained if the cue was invoked in sequence and allowed to finish. As a result, all channel levels are changed to the end look of the cue, whether or not they are tracking levels in the cue.

Testing the MIDI Ports

The MIDI I/O TEST window appears when you simultaneously press the blank center key and the [PAGE DOWN] key on the Encore Position Keypad. In this mode, no external MIDI commands are transmitted or received. The MIDI I/O TEST window is strictly for viewing raw data streams.

 **EXAMPLE:** You can use the MIDI I/O TEST window to perform the debug (loopback) test as follows:

1. Connect a MIDI cable from the MIDI IN connector port to the MIDI OUT port.
2. Simultaneously press the blank center key and the [PAGE DOWN] key on the Position Keypad.
3. Press the [ENTER] key to start the test.
4. Press [CLEAR] to stop the test.

In this loopback test mode, data is continuously output and received, and then the received data is compared to the transmitted data. As MIDI commands are received, the hexadecimal code of the last received command appears in the MIDI I/O TEST window. An error count is displayed in the window which shows how many mismatches have occurred, if any.

The MIDI I/O TEST operation is independent of whether the MIDI Control device interface is enabled, and independent of the Device # assignment. If MIDI commands do not appear in the MIDI Command History window in the Playback display when MIDI is enabled, the debug loopback test should be used to confirm what data is actually being received.

APPENDIX E:

ColorNet™ Remote Video

Encore Remote Video provides you with additional monitor locations, via the ColorNet™ network, which allows you to access lighting control information when you are at a location away from the Encore console. This is extremely useful when a remote monitor is needed in the "house", backstage at your theater, or in your studio. This appendix outlines how the Remote Video works with the Encore consoles. Remote Video Support is an option available on any Encore console model that was ordered as a configurable console with the Remote Video Option specified. If your Encore was not originally ordered with the option, a Field Upgrade Kit is required to add the Remote Video Option to your console. The Encore XL/2 model always includes the ColorNet Remote Video feature. For more information about, or to order the ColorNet Remote Video Option for your Encore console, please contact your local Colortran representative or dealer, or call Colortran Customer Service at (800) 959-7999.

About ColorNet™

ColorNet is an Ethernet-based communications system that allows information to be transmitted on a Local Area Network (LAN). When ColorNet systems are designed, all Ethernet rules must be followed in order for the system to function correctly. Most Ethernet cable, connectors, and equipment are commonly available through computer and office supply retailers.

Because the Encore consoles use ColorNet for digital transmission of video information, all remote monitor locations will have Remote Video displays of the same quality as those at the console's monitor. There is no possibility of any degradation of the signal; the picture should be just as clear on a remote monitor as it is at the console. If the picture appears "fuzzy" at a remote location, it is due solely to the quality of the remote monitor.

Because the Encore console broadcasts video information onto the ColorNet network, you may hook up as many as 29 different Remote Video locations operating simultaneously. The cables that connect the console and the nodes to the network are identical, so you can move the console to any Remote Video location and still use Remote Video.

System Components

In order to run one or more Remote Video monitors off an Encore console, you must have the following system components:

✍✍ An **Encore console** with the ColorNet Remote Video Support Option installed. If this option is installed on your console, there will be a BNC coaxial connector protruding from one of the three option slots on the back panel of the console.

✍✍ **Proper cabling** for the Remote Video system. Because it uses an Ethernet-based communication scheme, there are specific rules for the cabling of the ColorNet Remote Video system. See the following topic, *System Wiring*.

✍✍ **“T”-connectors or Drop Cables** for connecting to Encore Remote Video Nodes and to the Encore console, depending on which cabling method you are using.

✍✍ An **Encore Node** for each Remote Video location. Encore nodes are available in portable versions, and in permanent Wall-Mount versions that fit inside a standard 3½ inch deep, four-gang electrical back box. Portable Encore Nodes come with a separate power supply.

✍✍ A **color VGA monitor** for each location, equipped with a standard high-density 15-pin “D” connector.

You will also need an AC power outlet at your Remote Video location to plug in the monitor and the power supply for the Encore Node. A complete listing of ColorNet Remote Video products is shown in the following table:

Part No.	Product
7-1030	Encore 24/48 with ColorNet Support Option
7-1040	Encore 48/96 with ColorNet Support Option
7-1050	Encore XL with ColorNet Support Option
7-1081	Encore XL/2 (comes with ColorNet Support standard)
7-1090	Encore 24/48 Expanded with ColorNet Support Option
7-1110	Encore 48/96 Expanded with ColorNet Support Option
7-2141	Encore Remote Video Kit (includes VGA Monitor, Encore Node, & Power Supply)
7-3021	ColorNet Drop Cable, 6' length
7-3022	ColorNet Drop Cable, 12' length
7-3023	ColorNet Drop Cable, 25' length
7-3024	ColorNet Drop Cable, 50' length
7-3025	ColorNet Drop Cable, 100' length
7-4031	Single Gang Network Wall Plate (ColorNet Tap)
7-9021	ColorNet Tap Assembly (without Wall Plate)
7-9022	ColorNet 50? Terminator, Grounded
7-9022	ColorNet 50? Terminator, Ungrounded
7-3202	RG 58 /U Coaxial Cable with BNC connectors, 25' length
7-3203	RG 58 /U Coaxial Cable with BNC connectors, 50' length
7-3204	RG 58 /U Coaxial Cable with BNC connectors, 100' length
7-3205	RG 58 /U Coaxial Cable with BNC connectors, 200' length
7-3200	RG 58 /U Coaxial Cable with BNC connectors (specify length when ordering)
7-9011	BNC “T” Connector

7-9012	BNC Barrel Connector
7-9013	BNC 50 Ω Terminator, Grounded
7-9014	BNC 50 Ω Terminator, Ungrounded

Table E-1 ColorNet™ Products for Encore Remote Video

System Wiring

There are two types of system wiring for a ColorNet Remote Video system: **permanent** and **temporary**. If your system was designed at the factory and installed by a Colortran engineer, it is probably a permanent system with wiring in conduits inside the walls of your theatre or studio. If you are setting up your own Remote Video system in an existing facility, it will probably be a temporary system with exposed cables that will not be left out on a permanent basis.

Permanent Systems. Factory-designed and -installed systems use **Network Wall Plates** into which you can plug **Drop Cables**. Network Wall Plates allow you to connect a console or an Encore Node to the permanently-wired network at that location. Network Wall Plates are often referred to as “**ColorNet Taps**” for this reason. Use

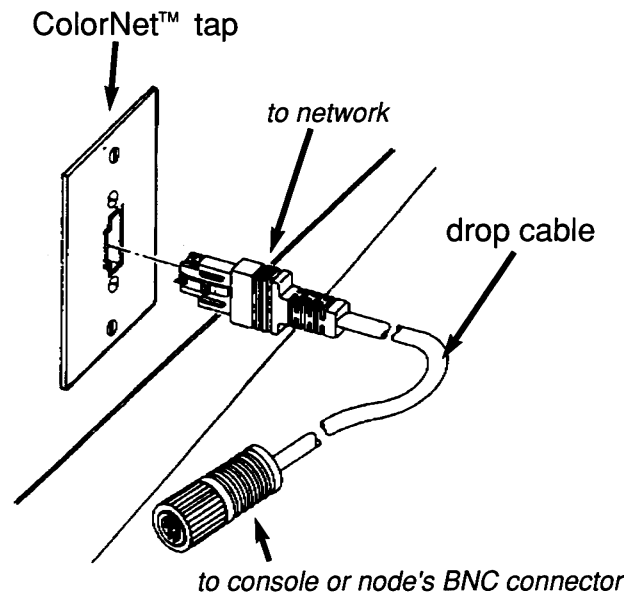


Figure E-1 Network Wall Plate (ColorNet Tap)

a Drop Cable to connect either a console or an Encore Node to a ColorNet Tap. The Drop Cable has a square plug on one end that plugs into the Network Wall Plate, and a BNC-type connector on the other end that attaches to the console or Encore Node's BNC coaxial connector. You can place your console at a ColorNet Tap location that is intended for Remote Video in order to connect to the ColorNet network at that tap. All other tap locations will continue to support remote monitors, regardless of which tap location has the console.

Temporary Systems. One or more temporary Remote Video locations can be set up using a length of RG58/U 50 Ω coaxial cable (approved for Ethernet applications) less than 607 feet long. This cable must be properly

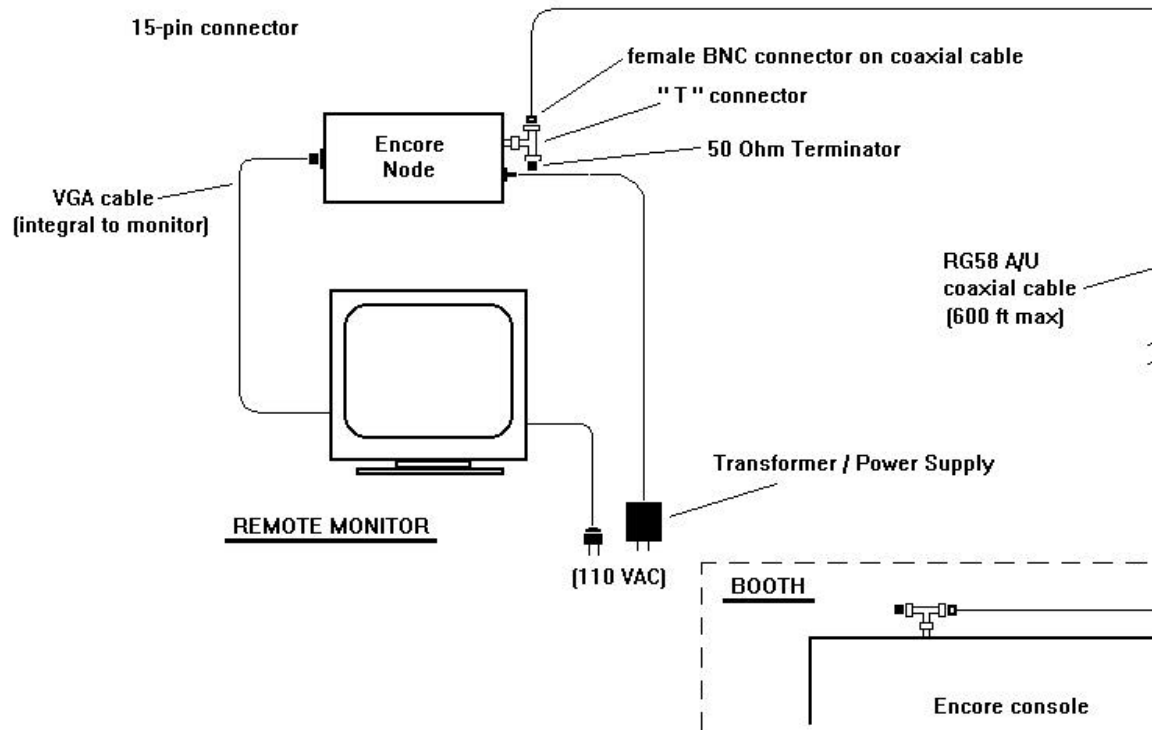


Figure E-2 Temporary Encore Remote Video System

terminated and all connections must use "T"-connectors and conform to the rules of an Ethernet Local Area Network (LAN). The console and all nodes must be connected to the cable with "T" connectors. Both ends of the cable must have 50 Ω BNC terminators connected to it. For a sample system, see Figure E-2.

Functions

The Encore Remote Video display is your primary information source when you are away from the main console. The Remote Video display mirrors the information that is shown on the monitor(s) at the console. You can choose to show a copy of either the display on the Main monitor, or the display on the Auxiliary monitor.

If you choose the Encore's Main monitor as the source for the Remote Video, then you will be able to see an exact replica of the display on the console's Main monitor, including the Command Line, Status Bar, and all the latest information in the current Main monitor display. The display on the Remote Video changes simultaneously with any display changes or edits executed on the Main monitor at the console. Assigning the Main monitor as the source for the Remote Video can be very helpful during technical and dress rehearsals when the lighting designer needs to sit in the house and still have access to specific lighting information.

If you choose the Auxiliary monitor as the source for the Remote Video, you will see the display currently assigned to the console's Auxiliary monitor. When the Remote Video source is the Auxiliary monitor, changes in the Main monitor display will be reflected on the Remote monitor if they are updated information that is pertinent to the current Auxiliary display. The Auxiliary monitor does not display a Command Line, so you cannot view commands on your remote monitor while in this mode. Choosing the Auxiliary monitor as the source is helpful when the only information you require is available on one display, such as the Playback display. The stage manager may find it helpful to always have access to the current status of lighting cues and their progress, as well as submaster types and levels, no matter what displays are being chosen at the console.

Remote Video Displays

The displays available to your Remote Video are dependent on your source. The displays available from a **Main monitor** source are:

- | | |
|----------------------|-------------------------------------|
| ☞ Stage display | ☞ Playback display |
| ☞ Preview display | ☞ Patch display |
| ☞ Group display | ☞ Patch: Parked Dimmers subdisplay |
| ☞ Submaster display | ☞ Patch: Non-Dim Dimmers subdisplay |
| ☞ Effects display | ☞ Profile Editor subdisplay |
| ☞ Cuesheet display | ☞ Setup display |
| ☞ Tracksheet display | |

The displays available from an **Auxiliary monitor** source are:

- | | |
|---------------------|-----------------------------|
| ☞ Stage display | ☞ Cuesheet display |
| ☞ Preview display | ☞ Tracksheet display |
| ☞ Group display | ☞ Playback display |
| ☞ Submaster display | ☞ Patch display |
| ☞ Effect display | ☞ Profile Editor subdisplay |

You can choose the source of your Remote Video in the Setup display under the (DISP SETUP) soft key. Choose the (NETWK MAIN) soft key to assign the Main monitor display as the source, or choose the (NETWK AUX) soft key to assign the Auxiliary monitor as the source of the Remote Video.



EXAMPLE: To select the Main monitor as your Remote Video

source:

1. [SETUP]
2. (DISP SETUP)
3. (NETWK MAIN)



EXAMPLE: To select the Auxiliary monitor as your Remote

Video source:

1. [SETUP]
2. (DISP SETUP)
3. (NETWK AUX)

Channel Formatting

Any channel formatting (selective channel viewing) on your Remote Video will be the same as the channel formatting of your chosen source. With the Main monitor as your source, you can perform channel formatting with the (SHOW CHANL) soft key command. With the Auxiliary monitor as your source, you can perform channel formatting with the (AUX CHANL) soft key command.

APPENDIX F:

Encore Console Specifications

	<u>24/48</u>	<u>24/48</u> <u>Expanded</u>	<u>48/96</u>	<u>48/96</u> <u>Expanded</u>	<u>XL</u>	<u>XL/2</u>
Channels						
Two-Scene mode	24	24	48	48	N/A	N/A
Multi-Scene mode	144	512	144	512	512	1024
Dimmers	512	512	512	512	512	1024
Submasters	24	24	48	48	48	48
Total Cues/Groups (per show)	300	550	350	600	600	600
Groups	200	200	200	200	200	200
Effects (per show)	99	99	99	99	99	99
Size and Weight						
Height, inches (cm)	6 (15)	6 (15)	8 (20)	8 (20)	6 (15)	6 (15)
Width, inches (cm)	46 (117)	46 (117)	46 (117)	46 (117)	46 (117)	46 (117)
Depth, inches (cm)	14 (36)	14 (36)	28 (72)	28 (72)	14 (36)	14 (36)
Weight, lbs (kg)	47 (21)	47 (21)	80 (37)	80 (37)	47 (21)	47 (21)

Table F-1 Encore Capacities and Physical Specifications

Interfaces Connector

- Parallel printer port 25 pin D
- Dimmer signal for dimmers 1-512 (standard) 5-pin XLR (Neutrik®)
- Dimmer signal for dimmers 513-1024 (XL/2 only) 5-pin XLR (Neutrik®)
- MIDI 5-pin DIN
- Single video monitor (standard) high density 15-pin D
- Second (Dual) video monitor (optional) high density 15-pin D
- Hand Held Remote (optional) 6-pin XLR (Neutrik®)
- Worklights (optional) 3-pin XLR (Neutrik®)

Environmental

- ✂✂ Operating Temperature: +5 °C to +45°C (+40°F to +113°F)
- ✂✂ Non-operating Temperature: -25°C to +65°C (-13°F to +150°F)
- ✂✂ Operating Humidity 20 - 80% non-condensing
- ✂✂ Non-operating Humidity 10 - 85% non-condensing

Standards Compliance

- ✂✂ USITT DMX 512-1990 dimmer protocol (except pins 4 & 5)
- ✂✂ Underwriters Laboratories (UL) listed
- ✂✂ MIDI 1.0
- ✂✂ MIDI Show Control 1.0

Power Requirements

- ✂✂ 100 - 240 VAC, 50 - 60 Hz (auto-ranging)
- ✂✂ 480 watts (max) (console only - no monitor or options plugged in)

APPENDIX G:

Auxiliary Monitor


(Dual Video Option)

The Encore Auxiliary monitor is a second local monitor connected to your Encore console that gives you the extra capability of viewing two different displays simultaneously. This appendix describes how the Auxiliary monitor works with the Encore consoles. The Auxiliary monitor is available on any Encore console model that was ordered as a configurable console with the Dual Video Option specified. A Field Upgrade Kit is required to add an Auxiliary monitor to a single-video Encore that is already in the field. For more information about the Auxiliary monitor, or to order an Auxiliary monitor Field Upgrade Kit for your Encore console, please contact:

 Colortran Customer Service at (800) 959 7999.

Setting Up the Auxiliary Monitor

The Auxiliary monitor comes with a video cable attached. The 15 pin "D" shaped connector connects to the vertical connector located on one of the three option slots on the Back Panel. AC power is also required for the Auxiliary monitor. The AC power cable may be plugged into a separate power outlet, or into an available switched convenience outlet on the Encore Back Panel.

 **NOTE:** *The convenience outlets and the back of the console will output the same voltage that is applied to the console. **They will not change the voltage from 120 to 240 Volts, or vice-versa.** Before plugging it in, make sure that your monitor is set to the correct voltage, or that it automatically adjusts to different voltages. Refer to the instructions that came with your monitor.*

Functions

The Encore Auxiliary monitor is an extremely helpful tool. It allows you greater versatility, especially during the editing of a show because you can see two different displays at the same time. This allows you to use a blind editor such as the Preview or Submaster display on the Main monitor, while you also "keep track" of what is happening live in the Stage or Playback display on the Auxiliary monitor.


It is important to note that the Auxiliary monitor is only for displaying information. The display on the Auxiliary monitor shows updates initiated by action in the Main monitor display. Updates such as Submaster timing and profiles, cue attributes, Automated channels, and other patch edits appear immediately on the Auxiliary monitor, as they are executed on the Main monitor. The Main monitor is the display that is "connected" with the Command Line. The available soft keys always match the display on the Main monitor.

The Auxiliary monitor does not display a Command Line or soft keys, although it does display the current Status Bar appropriate to the chosen display. The important information for each display is shown on the Auxiliary monitor (such as Stage Cue, Next Cue, Playback Fader Boxes, and timing information in the Stage display, and effect number and pattern in the Effect display).

Auxiliary Monitor Displays


You can access the Auxiliary monitor displays through the (AUX DISP) soft key in the Setup display under the (DISP SETUP) soft key. When you press the (AUX DISP) soft key, the ten Auxiliary monitor display options appear. The available Auxiliary monitor displays are:

 Stage	 Cuesheet
 Preview	 Tracksheet
 Group	 Playback
 Submaster	 Patch
 Effect	 Profile

-  **EXAMPLE:** To select a display to show on the Auxiliary monitor:
1. [SETUP]
 2. (DISP SETUP)
 3. (AUX DISP)
 4. Choose the desired display from the soft keys.


Channel Formatting

It is possible for you to assign the specific channels you wish to display on the Auxiliary monitor for the appropriate channel-oriented displays. The (AUX CHANL) soft key under the (DISP SETUP) soft key in the Setup display allows you to select the channels you see on the Auxiliary monitor. The (AUX CHANL) soft key works in much the same way as the (SHOW CHANL) soft key works on the Main monitor. You can choose to show active channels, the channel list of a cue, group or submaster, or a customized channel list.

 **EXAMPLE:** To show only the current active channels on the Auxiliary monitor:

1. [GO TO CUE] [#] [ENTER]
2. [SETUP]
3. (DISP SETUP)
4. (AUX CHANL) [ENTER]

Using the (AUX CHANL) [ENTER] command when the Auxiliary monitor is already displaying a customized channel list causes the display to show all the channels again.

 **EXAMPLE:** To show a selected channel list on the Auxiliary monitor:

1. [SETUP]
2. (DISP SETUP)
3. (AUX CHANL) [# list] [ENTER]

? **HINT:** (AUX CHANL) [# list] [ENTER] acts like a "Show Channel" command for the Auxiliary monitor. (AUX CHANL) [ENTER] acts like a "Show All" command when channels are currently formatted in the Auxiliary monitor.

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